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ABSTRACT

This monograph presents an overview and evaluation of the three years of development and initial implementation of the Early Childhood-Special Education Teacher Preparation Program (Master's degree level). The Comfield Teacher Preparation Model, a performance-based, field-centered, personalized and systematically designed program of sequences of orienting, foundation and consolidating experiences, served as the basis for the development and implementation of this project. Process and product modules used in conjunction with field work made up the curriculum. Teachers were trained to facilitate learning in both normal and handicapped children in regular classrooms. Procedures and instruments used for evaluating the program and the separate modules are discussed. The experimental group (10 original trainees) and two control groups (10 students each from traditional early childhood and special education teacher preparation programs) were compared to evaluate the program's effectiveness. The trainees were found to perform equally as well as their student counterparts. Some conclusions relative to the Comfield Model's effectiveness are presented. Data tables are included. (ED)

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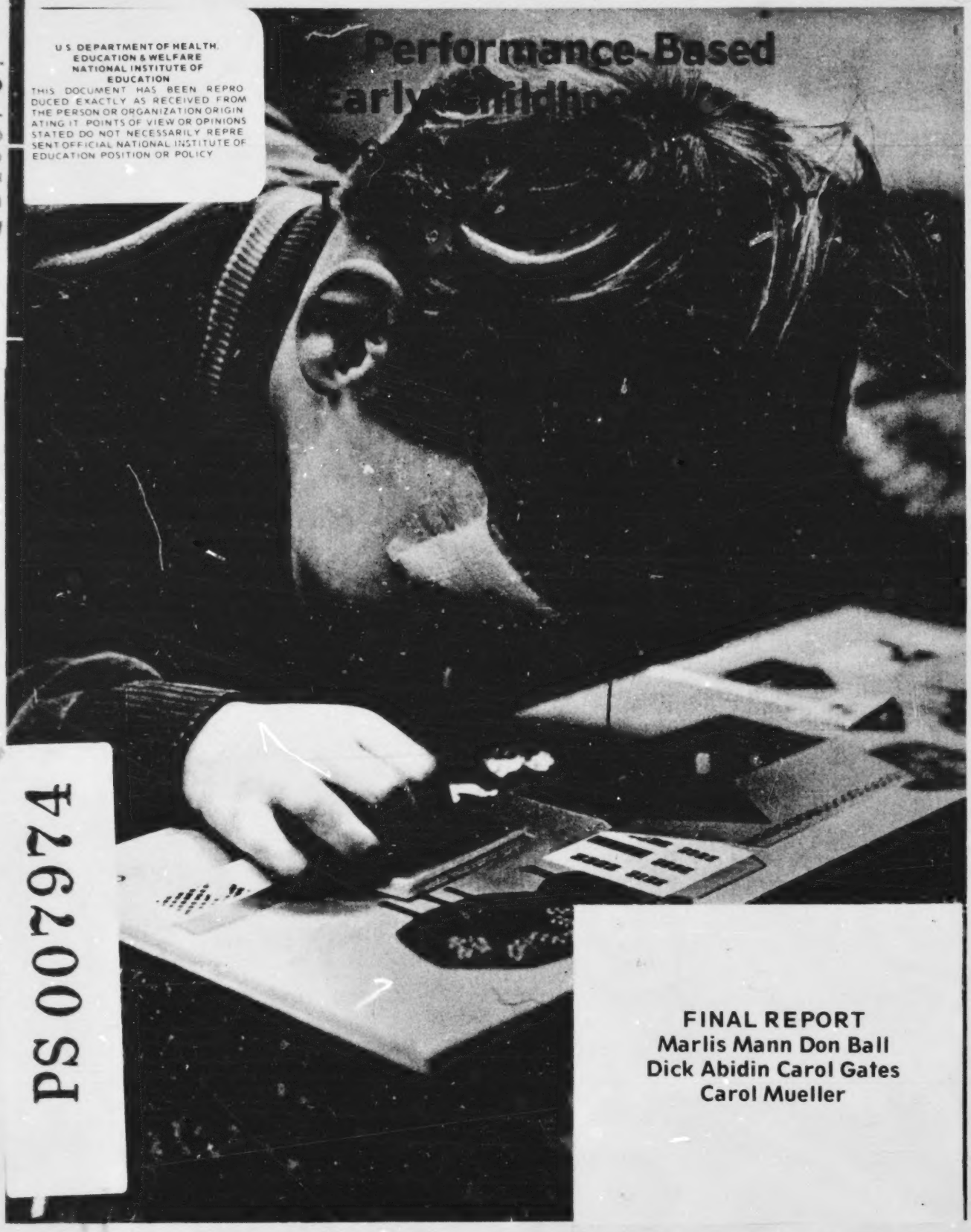

PS 002974

FINAL REPORT

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PREFACE

Numerous persons have contributed their time and professional talents to the development and implementation of this teacher preparation program. In some cases individuals are credited in the preface of the individual modules to which they contributed assistance.

The individuals mentioned here played a role in affecting the overall program.

The project centrally benefited from Dr. William T. Ward of the Northwest Regional Laboratory who introduced the Comfield model to this project director and answered endless questions that eventually led to the proposal for A Performance-Based Early Childhood-Special Education Teacher Preparation Program.

Secondly, this proposal received significant assistance in receiving funding from Dr. William Carriker, Chairman of Special Education, who strongly supported the concept of performance based teaching and saw the importance of early childhood in special education. The project gained much from his excellent administrative skills and support.

Dr. Richard Brandt, Chairman of Educational Foundations; Dr. Jerry Moore, Chairman of Curriculum and Instruction; Dean Frederick Cyphert, Mr. Kenneth Jones and Dr. Michael Caldwell all gave freely of their time and provided valuable administrative assistance.

The project was served by an advisory board which played a more active role in the beginning as a group while individual members were involved during later phases. Following are the members of the advisory board:

Dr. William Carriker - Special Education Department Chairman

Dr. Marlis Mann - Early Childhood Education Program Head

Dr. Dan Hallahan - Department of Special Education

Dr. Chuck Heuchert - Department of Special Education, Area of Emotionally Disturbed

Dr. Edmund Henderson - Department of Curriculum and Instruction, Reading Program Head

Dr. Jim Payne - Department of Special Education, Area of Mental Retardation

Dr. Jerry Wallace - Department of Special Education, Area of Learning Disabilities

Dr. Jim Kauffman - Department of Special Education, Area of Emotionally Disturbed

Dr. Jim Annicchiarico - Department of Educational Foundations, Measurement in Early Childhood

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Dr. Richard Brandt - Chairman, Department of Educational Foundations

Mr. Stan Cooke, Director of Speech and Hearing Services, Children and Youth Center, Department of Pediatrics, U. of Va. Medical Center

Rev. Frank Moss - St. Paul's Episcopal Church

Dr. Mal Provus - Director of Evaluation, Research Center, School of Education

Dr. Don Walker - Department of Special Education, Area of the Visually Impaired

Dr. Dan Moore - Pediatrics Neurologist, Director, Children's Rehabilitation Center

Several faculty members were active at various stages of development and implementation and are listed below in the primary role that they played.

	1971-72	1972-73	1973-74
Dr. William Carriker	Co-director	Administrative Consultant	Administrative Coordinator
Dr. Marlis Mann	Co-director	Co-director	Director
Dr. Dan Hallahan	Evaluation director	Co-director	
Dr Chuck Heuchert	Support Systems Director		
Dr. Edmund Henderson	Language Development Specialist		
Dr. Jim Payne	Cognitive Development Specialist	Process Module Coordinator	
Dr. Jerry Wallace	Motor Development Specialist		
Dr. Jim Kauffman	Social Development Specialist	Process Module Coordinator	Process Module Coordinator
Dr. Richard Brandt			Administrative Coordinator
Dr. Jerry Moore			Administrative Coordinator

	1971-72	1972-73	1973-74
Dr. Don Ball		Evaluation Coordinator	Evaluation Coordinator
Dr. Richard Abidin		Parent Education Coordinator	Parent Education Coordinator
Carol Beers			Product Module Coordinator
Carol Anfin		Head Teacher CDC	
Helen Musey			Head Teacher CDC
Carol Gates			Parent Education Coordinator and Supervisor

Over the three years several graduate students have assisted the research, development and implementation of the program. Although they are credited in individual modules all those that worked on the project are as follows: Richard Aubry, Patricia Cormier, Barbara Flood, Rex Schmidt, Celez Nitkowski, Mary Jo Duca, Millie Olin, Mitchell Bowman, Anna Zapatozny, Beth Dyer, Pat Obernauf, Carol Mueller, Kay Albertson, Elaine Barker, Lynne Mann, Kathryn Castel, and Carol Beers.

The project benefited from four fine secretaries; Paula Harrison, Carolyn Newman, Susan MacPherson, and Susan Hamilton.

Students worked various field centers in all phases of development. It was found in Phase II that centralizing students in a few centers was more effective. Therefore, for the final implementation phase Johnson School and Barrett Day Care Center served as the field centers. Julian King, principal; Kathyn Young, Pam Bracey, Cynthis Mouree, teachers at Johnson School and Clara Johnson, director; Bessie Payne, Beatrice Frye, Priscilla Spears, teachers at Barrett Day Care Center; all were most cooperative and worked very hard to make the field center component a valuable learning experience.

A final appreciation to Dr. Josephine Taylor who has served as the BEH Project Officer for this project since its inception. She has been one of the few persons who truly understood the significance of the Comfield model as well as the concept that a teacher for any child must first understand all areas of child development and then be skilled in basic teaching processes. With this combination he/she can then provide an educational environment for any child that is either developmentally delayed or in the normal range in any given sub-area of development.

It is hoped that this final report will aid other educators to better their understanding of this Early Childhood-Special Education Teacher Preparation Program and those concepts basic to its purpose.

APPENDICES

Monograph I	Performance Based Early Childhood-Special Education Teacher Preparation Program: Overview	Marlis Mann Kay Albertson
Monograph II	Child Development Center Curriculum: Child Program for the Early Childhood-Special Education Teacher Preparation Program	Marlis Mann Carol Anfin Helen Musey
Monograph III	Parenting Skills: A Trainer's Manual	Richard R. Abidin
Monograph IV	Directive Process	Kay Albertson James Payne
Monograph V	Developmental Process	Marlis Mann
Monograph VI	Language Development: Auditory Perception	Marlis Mann Stan Cook Kathy Young
Monograph VII	Language Development: Reading Readiness	Elaine Barker
Monograph VIII	Language Development: Phonology	Marlis Mann
Monograph IX	Language Development: Semantics	Marlis Mann
Monograph X	Language Development: Syntax	Marlis Mann
Monograph XI	Perceptual Motor Development	Carol Beers Linda Bunker Marlis Mann
Monograph XII	Attending Development	Carol Mueller Dan Hallahan
Monograph XIII	Social Development: Self Help Skills	Lynne Mann
Monograph XIV	Social Development: Individuation	Kathryn Castle

The following modules are part of the program but were not printed in that printing costs exceeded amount of funds available to prepare the final report:

Cognitive Development
Language Development Overview
Behavior Modification Process
Social Development: Behavioral Adjustment to Society

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INTRODUCTION

One of the present and future needs in education is teachers who can assist the development of all children and not just those in the "normal range" of cognitive, language, perceptual motor and social development.

Recently, as a result of various efficacy studies and numerous public appeals, professional educators have begun to question the early labeling of children outside developmental norms. Originally such labeling was conceived as a necessary step for special class placement where hopefully the child's educational needs would be met. All indications now imply that this early segregation and pre-labeling may have been more detrimental than ameliorative. The underlying rationale of this teacher preparation program is to give each master's level student the skills and competencies for facilitating the development of both normal and handicapped children so that he/she will be able to work effectively within the context of non-segregation and non-labeling. This can be accomplished by the acquisition of basic teaching strategies.

Knowledge of child developmental sequences from birth through approximately age seven, and the roles of learner characteristics and situational variables in setting environmental conditions for development.

The Comfield Teacher Preparation Model served as the guiding structure for the development and implementation of this project.

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PURPOSE OF THE PROGRAM

The purpose of this project as stated in the original proposal was to develop both a performance-based teacher education program at the master's level and a child education program for all children birth through approximately age seven. The planning proposal was concerned primarily with serving children who possessed developmental discrepancies and whose developmental learner characteristics are felt to be handicapping. These children could be labeled severely handicapped and characterized by one or a combination of the following conditions: mentally retarded, emotionally disturbed, visually impaired, physically handicapped culturally deprived, speech and language handicapped, hearing impaired, and learning disabled. The major concern was to prepare teachers that could work with the severly handicapped pre-school child, as well as those who are minimally handicapped and "pre-labeled" children. It was the basic premise of the director and Comfield model that developmental ontogenies become the goals for all young children and it is the learner characteristics combined with the developmental level of a child that defines the type of handicapping condition.

More specifically, this program attempts to individualize early childhood education in a way that attains educational objectives set for all young children (including those with developmental delays) by parents, educators, research and literature; and, individualizes a performance-based, field-centered, personalized, and systematically designed teacher training program that prepares teachers to:

(a) become developmental diagnosticians in order to assess a child's strengths, weaknesses, and current developmental levels and to utilize this information in prescribing an educational environment to assist the child's development and

(b) develop skills which will enable the trainees to facilitate the environment they prescribe that will assist the growth of any child with or without developmental discrepancies in the areas of social, physical, perceptual, cognitive, language, and perceptual motor development.

Developmental discrepancies exist in children of all ages from mild deviation which is considered "normal" through extreme deviation which is judged as handicapping or pathological. This teacher training program is concerned with developing an educational program to serve those children whose developmental characteristics are felt to be handicapping. These children may be thought of as "high risk" or "pre-labeled" children. Without direct intervention in their developmental pattern the probability of their becoming handicapped and receiving a special education label (e.g., MR, LD, ED) is extremely high. These children have not traditionally been served by special education until they have been allowed to fail in an academic setting or become of grave concern to their parents or the community. Thus, this project has designed a child program for these children and a teacher training program to prepare learning facilitators to staff such a program. It is hoped that programs of this nature will prevent children from becoming labeled and unnecessarily placed in special education classes and categories. Children served by this program show developmental discrepancies in one or more of the following areas of development: social, physical abilities, perceptual abilities, perceptual-motor, language, and cognitive.

00011

MODEL OF TEACHER PREPARATION PROGRAM

The Comfield model was selected because one of its basic tenets is that the objectives of a teacher preparation program must be directly linked to the educational objectives set for the learners. Since the goals for the education of young children have been extremely vague it was necessary to work within a framework that would force clear identification of these goals before developing a relevant teacher preparation program. Table I provides a schematic representation of the Comfield model. Steps (1) and (2) become the child program while steps (3) and (4) represent the teacher preparation program derived from steps (1) and (2).

The first step then in developing this teacher preparation was to identify developmental learner outcomes for children, birth through approximately age seven. This was done mainly by reviewing the existing literature in child development. Ontogenies were compiled in the area of social, motor, perceptual motor, language, and cognitive development. From these ontogenies the goals of early childhood education have been derived.

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Step I: Identifying Developmental Outcomes

The goals or objectives of the child program in early childhood differ from other elementary and secondary teacher preparation programs developed on the Comfield model.

The objectives of this teacher program rests on developmental learner outcomes for young children, birth through approximately age seven, in the areas of cognitive, social, language, and perceptual motor development.

The early childhood years are the critical period for development in all these areas. The child has not yet reached the skill stage of human growth and development that is found in the elementary and secondary programs. Therefore, learner outcomes are termed developmental goals and are not stated in behavioral objectives. One can train in skills if effective; while a learning facilitator cannot train child development. Therefore, goals are set and appropriate conditions and environments prepared (Step 2) but a timeline for a given development cannot be established due to the unique developmental rates of each child. See Child Development Center Curriculum: Child Program for the Early Childhood - Special Education Teacher Preparation Program, Monograph II for complete discussion of the developmental concept for Step I and presentation of the developmental learner outcomes for young children.

Step I also includes a discussion of the relevancy of the outcome to the child's total development and ways of measuring the developmental outcomes when they are available.

Step II: Enviornmental Conditions Affecting Learning Outcome

In Step II, the conditions that bring about the learner outcomes, were determined by utilizing appropriate information from the literature at a specified developmental level (stage or age). These conditions have become the curriculum for the Child Development Center.

The University of Virginia early childhood curriculum consists of four major elements. These include the learner characteristics of the children, situational variables, teaching strategies or processes, and content carried by the selected strategy.

The set of conditions at any point in time stated as conceptualizations and performances are the basis for designing instructional experiences for children. More specifically:

Learner characteristics play a role in the type of response the child makes. They include developmental level, response at any given moment. Other learner characteristics found to be relevant are sex, native language, eyesight, hearing, attending ability, and timing.

Situational variables have to do with physical content and group structure of the preschool environmnet. The adult-child ratio is an obvious situational variable. Other variables include placement of materials and equipment, freedom of movement, and time schedule.

Instructional variable are learning strategies. Learning strategies are related to the pattern of the teacher's behavior - the manner in which she elicits pupil response and the type of feedback she gives to the child's response. At the University of Virginia Child Development Center two basic instructional strategies or processes are used - developmental and directive or a combination of the two.

Content carried by the strategy is the conceptual understandings the teacher identifies relating to the concept being introduced in the preschool environments or is dependent upon the child's words or the objects that the child is attending to. The developmental process infers that in many situations the child's motivation and attendings decide the content.

Figure I depicts some of the components of each element that the teacher would need to know and/or be able to do.

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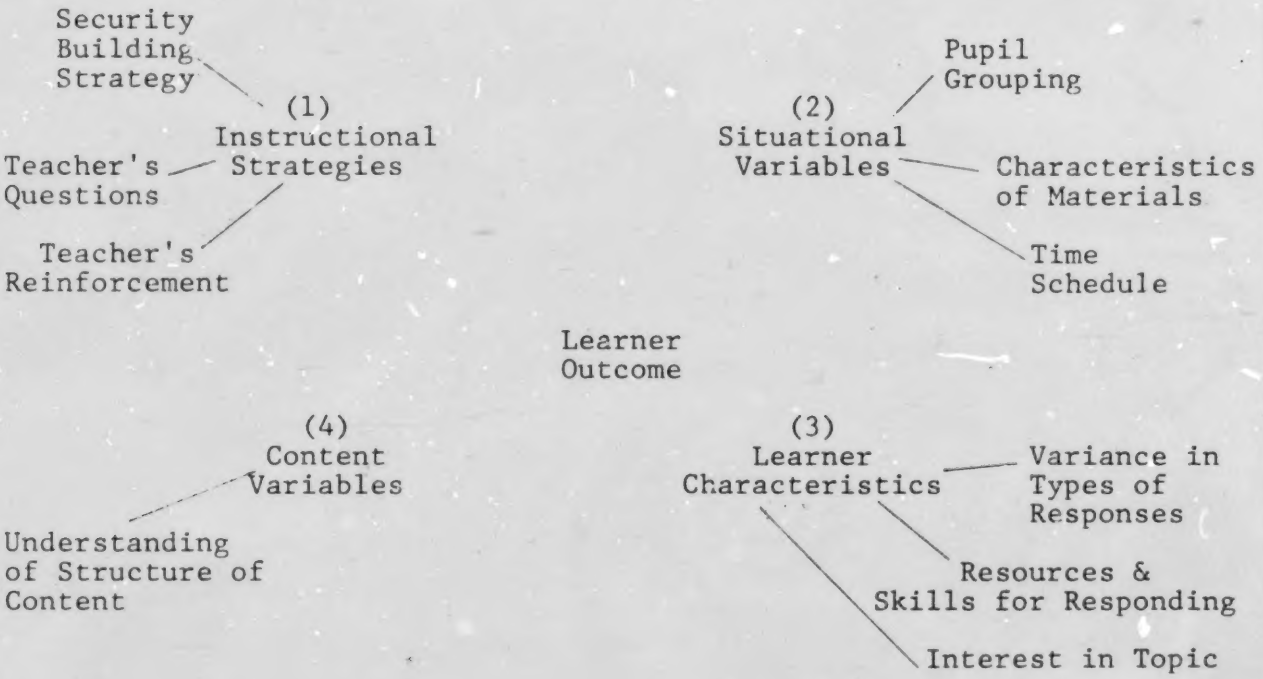
Figure I



(Schalock, 1968)

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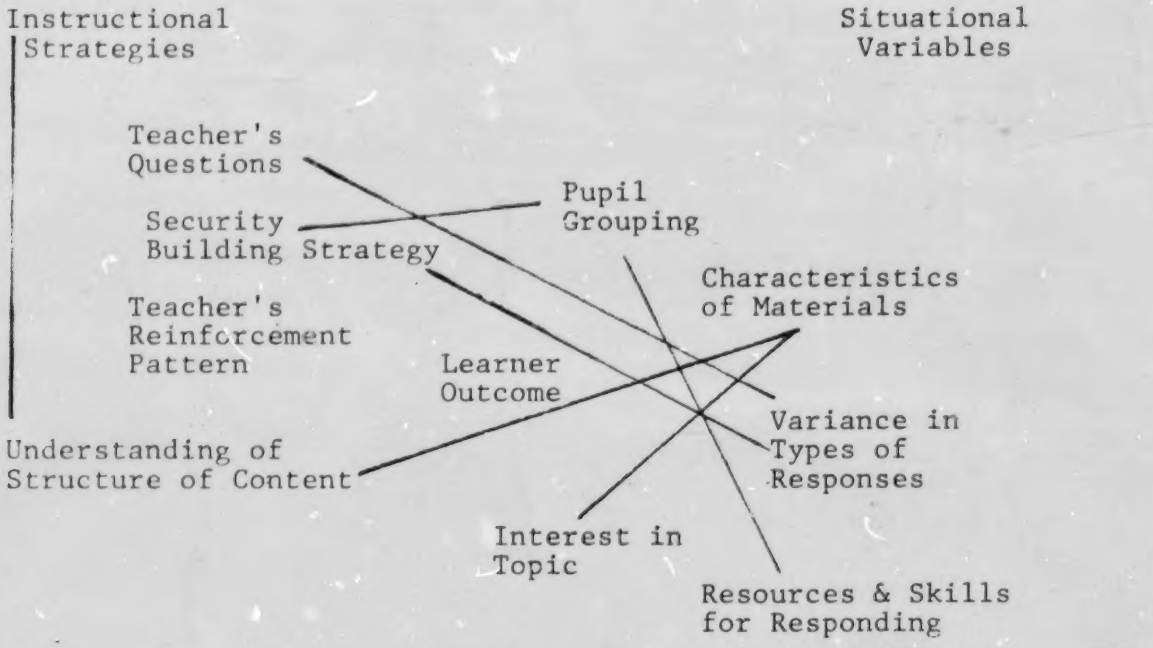
While planning this type of curriculum one must look at the variables in conditions for learning. Following are steps in setting conditions for learning:

1. Assess to determine child's present level of operation for a given developmental outcome.
2. Determine the developmental learner outcome which will relate to the next developmental level or broaden skills in the present developmental level depending on information received in (1).
3. Evaluate learner characteristics of child as they relate to the outcome.
4. Evaluate situational variables.
5. Select appropriate strategy for the child that takes into account 2, 3 and 4.
6. Determine content for the strategy.
7. Organize the learning environment.
8. Implement the designed conditions.
9. Continually assess where the child is in relation to identified developmental outcome.

Figure II depicts the way in which individual components of the teaching act and how they may be interrelated. It demonstrates the complexities in the teaching-learning process. This complexity affects how the learning facilitator responds to the above setting of conditions process.

Figure II



(Schalock, 1968)

A complete description of the Child Development Center Curriculum is found in Monograph II of this report.

Step III: Competencies Needed by Learning Facilitators

Step III, the learning facilitator (student) behaviors, apply to persons who interact with the child, be it parent, teacher aid, or teacher.

These cognitive and skill behaviors became the goals of the Early Childhood-Special Education Teacher Preparation Program. Steps I and II provided the base from which these competencies were identified.

See Performance-Based Early Childhood-Special Education Teacher Preparation Program: Overview, Monograph I for listing of the competencies needed by students in this program.

Step IV: Teacher Preparation Program

Step IV, the teacher training conditions that bring about the competencies of adults, vary from outcome to outcome.

Research knowledge in teacher training was utilized for the provision of appropriate experiences to develop learning facilitator competencies.

The training program is composed then of a series of content modules in the areas of language, cognitive, perceptual motor and social development and three process modules - developmental, behavioral, directive and a parent education program. An advantage of this innovative teacher-training approach is that it provides maximum opportunity for intensive study, continuous evaluation, and less fragmentation of content.

In addition, such a structure is more efficient in terms of competencies acquired relative to instructional time. It allows a greater amount and proportion of actual experiences with children of various developmental levels, handicapping conditions, and intellectual capabilities. Each module in the teacher training program is based on the Comfield model sequence of orienting, foundation, and consolidating experiences. More specifically these experiences are:

Orienting experiences include definition, concrete referents and models of the competency that the set of learning experiences entailed within the instructional system are to bring about. Orienting experiences may take the form of direct observation of children or teachers in classrooms, observation of filmed "models", etc., and may be used at any level within any instructional system, depending upon the needs of the student in the system.

Foundation experiences are a set of learning activities designed to enable a prospective learning facilitator to master a given bit of knowledge, a skill, or a sensitivity. These experiences will carry content that relates directly to the teaching process. They will become an integrated part of observation, practice and assessment experiences that are designed to lead to the demonstration of professional competency. The subject matter of educational psychology, human development, instruction and evaluation, etc., provide the subject matter around which such experiences will be developed. The expected outcomes of these experiences are the knowledges, skills and sensitivities that teachers need in order to create the conditions that will bring about the outcomes expected from preschools. A requirement of the foundations experience is that all students show evidence that they have mastered the conceptual frameworks of the disciplines upon which they are to draw as teachers of young children. An example of a knowledge or conceptual framework is Lee's Developmental Sentence Types. An example of a performance capability or skill is the ability to use these sentence types in analyzing a young child's syntax.

Consolidating experiences are a set of learning activities designed to bring about an extension of the competencies demonstrated under simplified conditions to the point where they are applicable under real-life conditions. Both synthesizing and consolidating experiences are developed in the field centers.

The process modules equip the trainees with three teaching strategies while the product modules contain the content to which one applies a teaching strategy. The product module is designed to do the following:

Identify desired developmental learner outcomes for children birth through age seven: (Step II)

Identify the conditions necessary for producing selected outcomes identified in Step I; (Step II)

Identify the learning facilitator and developmental diagnostician behavior or skills essential for the provision of the conditions referred to in Step II; (Step III)

Identify the conditions necessary for the production of the behavior identified in Step III; (Step IV)

* See Table I.

In both the product and process modules a systematic approach to facilitating learning is assumed to be more effective than non-systematic approaches. By applying systems design principles throughout the learning outcomes desired will more likely be attained. The means by which this is done is through learning modules. Generally speaking this means that each of the functional parts within the module as well as the whole module assumes three characteristics: 1) designed to bring about specific and measureable outcomes; 2) designed so that evidence as to the effectiveness with which it brings about its ended outcome is continuously available, and 3) designed to be adaptive or corrective in light of that evidence. In other words, it is a process that requires the user to: a) know what it is he wants to accomplish, b) order events in such a way that he has some probability of accomplishing it, c) assess whether these events do in fact accomplish that for which they were intended, and d) if they do not, modify the events or the outcomes until the discrepancy is alleviated. Within each product module the trainee will learn the cognitive content of the particular area of development, evaluation procedures, and precedures for designing appropriate learning conditions for each individual child.

Evaluation of the Prototype

a. The various aspects of formative evaluation of the proposed early childhood education teacher training program are illustrated in Figure 2.

   (1) Number (8) in Figure II implies continual assessment must be made as to the relevancy of the selected learner outcomes.

   (2) Number (7) in Figure II implies instruments need to be developed and/or selected which best assess whether the conditions did in fact bring about the learner outcome. Therefore, each module includes assessment instruments to be used with the children to measure the specific area of development involved. Standardized tests will be used when applicable.

   (3) Number (6) in Figure II suggests assessment instruments to measure the teacher in-training performance with children to determine if he/she can provide the conditions that bring about the educational outcomes desired.

b. Instruments for entering and exit level behaviors of the trainees for each learning module were developed in most cases. Based upon these individual assessments an overall assessment battery will be developed for measuring future entry levels of students entering the early childhood-special education program. This battery will enable individual students to omit modules in which they already demonstrate competencies.

c. Other evaluations would include impact of program on the community, School of Education and other agencies involved with the program and the follow-up evaluation to be made of first and second year trainees in their job situations.

d. A proposed comparative evaluation will be made between the trainees job performance and the performance of students who are traditional majors in special education and early childhood education minors or vice versa.

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Characteristics of the Comfield Model

The Comfield Model has four basic tenets. It calls for a performance-based, field centered, personalized and systematically designed structure.

Performance-based. It is performance-based in that the teacher in training will have the ability to perform functions to which he will be held responsible upon completion of the program. In this program the final performance represents the program's major goals which trains teachers to:

(a) become developmental diagnosticians in order to assess a child's strengths, weaknesses, and current developmental levels and to utilize this information in prescribing an educational environment to assist the child's development and

(b) develop skills which will enable the trainees to facilitate the environment they prescribe that will assist the growth of any child with or without developmental discrepancies in the areas of social, motor, cognitive, language and visual perceptual development.

Field-centered. Field-centered refers to the ability of the program to supply real-life situations with young children so that students of teaching can develop their competencies. The requirement has far-reaching implications for the structure and organization of both the college and the cooperating public school system and local preschools.

It means that the institutions and agencies responsible for the education of young children in the Charlottesville area, join in developing and implementing the design, operation and development of the program. It is inherent in this model that the teachers in the field who are supervising teachers in training while they develop specific competencies should also be competent in the skills. Therefore, continual in-service training of the field supervisors becomes a necessary part of this program which was specifically planned for and implemented in the third phase of this program.

Personalized. The teacher training program in early childhood special education is personalized in that it accomodates individual differences in learning rates, styles, and objectives. Individual differences in learning patterns, capabilities and preferences of the student in his program must be more than recognized; they must be taken into account fully in the design of this program. Concern for individual differences focuses upon:

1. Students having various options available in their learning experiences.

2. Learning experiences under the control of the student.

3. Opportunity to develop an idiosyncratic teaching style.

4. Opportunity to negotiate that which they wish to take from the program.

5. Opportunity to contribute meaningfully to design and development of the program.

6. Opportunity to negotiate the settings in which they will demonstrate their competencies.

7. Opportunity to negotiate the criteria by which judgement is to be made about competence.

8. The right to continually assess the relevance of the objectives that have been negotiated, and the relevance of the educational experiences being pursued in relation to those objectives.

As such, the effort to personalize within the context of a performance-based, field-centered teacher education program is concerned with how each student finds relevance in the program in light of his individual characteristics and commitments.

Many of the eight ways of personalizing the program were used with the students in Phase II and Phase III. It became evident in Phase III that if a student is not aware of himself, goals and commitments it becomes extremely difficult to meet his needs by personalizing a program. The discussion in Phase III elaborates on selection of candidates for teacher education.

Systematically designed. It is systematically designed in that it is purposeful, data dependent, and adaptive. The application of systems design principles means that each of the functional parts within the program as well as the program as a whole will assume three characteristics:

1. It is designed to bring about specified outcomes in the preschool children and in the students in teacher preparation.

2. It is designed so that evidence of the effectiveness with which it brings about its intended outcomes is continuously available. There is a continual ongoing evaluation of the effectiveness of the teaching training component and of the students' effectiveness in working with young children.

3. It is designed to be adaptive and self-corrective in light of that evidence in the immediate feedback system.

The whole process is goal oriented and requires the user to know what it is he wants to accomplish, to the order of events in such a way that he has some probability of accomplishing it; to assess whether the specified events do in fact attain their goals, and if they do not,

how to modify them until they do as long as it's feasible in light of the child's unique developmental rate. It may be the developmental goal may need to be changed if the child is plateauing in perceptual motor and putting his emphasis in language.

PHASE I

During Phase I (1971-72) the language product module and the developmental, directive and behavioral process modules were developed.

Phase I was a planning year and since funding was minimal, module development did not occur as rapidly as had been anticipated. Another difficulty lay in developing an understanding of the Comfield model in the minds of the staff. Since it required a new way of conceiving education and children it required the ability to take the research, theory and child development literature and place it in a completely new framework. Also, in most cases the graduate student staff did not have the psychology and child development background for module development. Consequently much time was spent in educating the staff before actual development occured. This difficulty occured throughout the three phases each time new staff members were added to the project. Fortunately by Phase III there was some carry over of staff and the project was very cohesive at that point in that most of the staff had a common understanding of the Comfield model and the project.

A major conceptual development that occured during the planning year was the identification of the three major teaching processes or strategies in early childhood--directive, developmental and behavior modification. It was felt by special education staff members that most developmentally delayed (handicapped) children benefit most from the directive and behavior modification strategies. In other words the directive and behavior modification strategies are usually paired with developmentally delayed or deviant learner characteristics, while children with learner characteristics in normal developmental range are thought to benefit most from the developmental strategy. The initial phase of the teacher preparation program then would be to have the student to go through three strategy or process modules to gain the basic teaching skills one would need to be effective with all children.

It was at this point that the connotation of process modules (the directive, behavior modification, and developmental strategies) and product modules (language development overview, auditory perception, reading readiness, phonology, semantics, syntax, perceptual motor development, attending, self-help skills, individuation, cognitive development, and behavioral adjustment to society) became a basic part of the program.

Language development was the product (or content) that was to be used when teaching the process modules so an overview language development module as well as modules for specific language areas of auditory perception, phonology, semantics, syntax and reading readiness were designed and developed.

During Phase I (1971-72) the language development product modules and the developmental, directive and behavioral process modules were developed.

PHASE II

(the planning-prototype year)

Phase II (1972-73) included field testing of the language product modules and the three process modules. Six masters level trainees participated in this program. A teacher effectiveness formula was also tested as part of an evaluation module. The Child Development Center was operational to serve as a laboratory for the students in the experimental field testing and to implement the child program aspect of the modules that had been developed thus far. The Parent Education Program was in planning phase. Also additional promodules of cognitive, attending, perceptual motor development, self-help skills, individuation, and behavioral adjustment to society were developed.

Field Testing of Modules

The three process modules were taught first in sequence of the partial implementation phase. The purpose of teaching the three process modules with the language development overview product module is so the trainees will be able to transfer the process teaching strategies to other product modules that follow. One of the skills gained in the training program is that the trainees will be able to select the appropriate strategy for a given child.

Within the process module the students demonstrate cognitive understanding of the teacher strategy. The process modules contain what is referred to as synthesizing experiences which enable the trainee to integrate cognitive knowledge with actual implementation of the teaching strategy with children. After completing the three process modules the students went through the other language development product modules. In each of these they demonstrated each process with the product content with children having normal and delayed characteristics.

Teacher Effectiveness Formula

In Phase II an Evaluation Module concluded the end of the partial implementation. The student was exposed to a method for evaluating both children and herself. This evaluation technique was developed by Professors Kauffman, Hallahan, Payne and Bell and became known as the Teacher Effectiveness Formula. (Kauffman, et.al., 1973) These professors identified certain common features of performance-based models distinguish them from other educational approaches. These common features are the elements of the evaluation formula presented in this paper.

Learner Outcomes. Every performance-based training program for teachers or children specifies behavioral goals for the learners. The terminal goals not only state precisely what the learner will be able to do under a specific set of conditions, but also define the criteria to be used in judging his performance (Mager, 1962). Frequently stated

also are the subgoals which represent approximations of the terminal objectives or preconditions necessary for performance of the final behaviors. These instructional goals may be used to construct an objective test for assessing learning at any point in the teaching pro-ram. Thus, what an individual has learned or acquired (A) may be expressed as the factor Be-Be, where Bc represents the behaviors currently included in his repertoire, and Be denotes the behaviors learned before entry into the teaching program.

For example, the goal for a child who does not know colors may be stated as follows: Given any five objects, identical except for color, the child will be able to point to the correct object when instructed, "Point to the _____ one," for each of the colors red, blue, yellow, green, and black. An approximation of this goal might be stated: Given any two objects, identical except for color, the child will be able to point to the correct object when instructed, "Point to the blue one," if one object is blue and the other is not blue. If the child is to be taught receptive language responses, such as comparative and superlative inflections, the instructional goal could be stated: Given pictures of four objects differing only on one dimension, the child will be able to point to the correct picture when instructed, "Point to the ____er ____," and "Point to the ____est ____," for each of the dimensions small-big, short-long, thin-thick, and shallow-deep (see Baer & Guess, 1971, for description of a teaching program).

Conditions for Learning. Performance-based education is characterized by detailed description of the environmental conditions which bring about behavioral changes desired by the teacher. In the terminology of the behaviorist, systematic manipulation of the environmental events responsible for learning (including cues, corrections, and consequences) is intended to produce specific learner outcomes. Because the teacher's behavior is undeniably related to the goals of instruction, it can be viewed as a series of discrete operations and can be examined for its functional relationship to learning. "A teacher accomplishes a teaching objective by effectively arranging the occurrence of stimulus events for the child--that is, by controlling when and how she talks, praises, shows things, and prompts responses (Becker, Engelmann, & Thomas, 1971, p. 1)." In the simplest possible analysis, then, teaching consists of a series of environmental events: (a) the teacher presents an antecedent event, (b) the learner makes a response, and (c) the teacher presents a subsequent event. Thus, what the teacher does that "makes learning happen" can be quantified as the sum of teaching "cycles" which constitute her method (C).

Teaching cycles may be conceptualized as specific stimulus response-reinforcement relationships, or they may be broadly conceived as teacher-pupil interactions. Thus, many different teaching styles can be measured in behavioral terms. The essential elements of a teaching cycle are a pupil behavior and a teacher behavior--without these two events, teaching cannot be measured.

Highly structured, directive teaching consists primarily of a triad of events: 1) an antecedent behavior of the teacher (antecedent stimulus: (Sa) 2) followed by a pupil response (R) which is reinforced or corrected by the teacher (subsequent stimulus: (Ss). For example, if the teacher wants the child to learn the name of an object (e.g., a ball), she might show the child a ball and say, "This is a ball. What is this?" (Sa), to which the child might respond, "Ball" (R), which the teacher could reinforce with, "Yes, this is a ball. Good boy!" (Ss). When the next Sa is presented, the cycle (Sa-R-Ss) begins again.

In less directive teaching, either the Sa or the Ss component of the cycle is frequently omitted. The teacher may reinforce or correct spontaneously emitted responses (R-Ss) or prompt responses which she neither corrects nor reinforces (Sa-R). For example, the child may happen to find a cookie on the table and emit the response, "Cookie" (R), after which the teacher may say, "You found a cookie" (Ss). Or the teacher may say, "Let's color with these crayons," and present the child with crayons and paper (Sa), to which the child responds by coloring on the paper (R), which is not followed by any teacher reaction.

A teaching cycle, as defined in this paper, may be either a highly structured one (Sa-R-Ss) or a less directive one (R-Ss or Sa-R). Each of these three kinds of teacher-pupil interaction legitimately represents a single teaching cycle.

Rate of Acquisition. The presence of a teacher is neither a necessary nor a sufficient condition for learning. Children can learn in the absence of a teacher; environmental events shape behavior regardless of whether or not they are purposely controlled (Skinner, 1971). Also, a teacher may be present but not facilitate children's learning because she lacks either the inclination to do so or the technical skill necessary to change behavior in the desired direction. An effective teacher accelerates the rate of learning. "Teaching is the expediting of learning; a person who is taught learns more quickly than one who is not (Skinner, 1968, p. 5)."

The efficiency of performance-based training is evaluated in terms of learner outcomes achieved and maintained per unit time. It is assumed that more effective instruction results in earlier acquisition of the desired behaviors. Consequently, teacher effectiveness is considered to be partially a function of a time factor (T). Although learning is traditionally measured as rate per year (grade equivalent), it can be expressed as rate per minute, hour, week, or any other unit of time which allows for a desired level of precision.

A Teacher-Effectiveness Formula

Teaching is the use of instructional methods (C) to produce behavioral change (A) in time (T). Teacher-effectiveness connotes an inverse relationship both between behaviors acquired and time and between behaviors acquired and instructional cycles. Thus, the product of the equations $E = \frac{A}{C}$ and $E = \frac{A}{T}$ quantifies the relationship between teaching and learning as:

$$E^2 = \frac{A}{TC} \text{ and } E = \frac{A}{\sqrt{TC}} = A\left(\frac{\sqrt{TC}}{TC}\right)$$

The latter formula is most appropriate for computation of teacher-effectiveness ratios. For ease of exposition it may be rewritten:

$$E = \frac{A}{T \frac{C}{A}}$$

The formula has as its numerator (A) a quantity equalling the number of specific behaviors taught at any given point in an instructional program (Bc-Be). Be is subtracted from Bc in order to avoid crediting the teacher with performances already in the learner's repertoire. Bc includes only those performances currently exhibited by the child. Thus, behaviors learned but forgotten (not maintained) at the time of evaluation are not allowed to inflate the effectiveness ratio, and the ratio will carry a negative sign if the learner forgets more than he is taught. Because the numerator of the formula is the number of responses learned, the teacher who can attain a greater number of behavioral objectives, given the same instructional techniques and time, will have a higher effectiveness ratio. If a teacher can double the number of behaviors taught, without increasing time or instructional cycles, she will double her effectiveness ratio.

The denominator of the formula is the product of the cumulative amount of time during which the teacher has taught Bc-Be behaviors (A) to the learner and the average number of instructional cycles per behavior taught. When the quantity C is divided by A, an index of the density of instruction is obtained. The teacher who can produce a given behavior in a child with less effort, i.e., with fewer instructional cycles per behavior taught, will be more effective. It should be noted that because time is a coefficient of instructional events, the most efficient teaching methods will be rewarded by increased effectiveness ratios. If the teacher can reduce both T and C by one half, she will increase her E ratio by a factor of 2. Reduction of either T or C by one half will increase E by approximately 1.5.

As presented above, the formula is designed to measure the effectiveness of a teacher in teaching one set of behaviors to one learner. E is concept-specific. That is, a teacher is not "effective" in some abstract sense of the work, but she is effective in relation to teaching a specific skilll. However, she will not teach a given skill to all children with the same effectiveness. By summing across children, one may find an average E ration as follows:

$$E_x = \frac{A \frac{TC}{TC}_1 + A \frac{TC}{TC}_2 + \ldots + A \frac{TC}{TC}_n}{n}$$

When the learner is instructed in a group, the terms T and C should be divided by the number of learners in the group. Although this formula for E_x will yield a teacher-effectiveness ratio which is averaged across learners, it takes into consideration only actual instructional time. It is conceivable that teacher may be highly effective in producing learning during single instructional sessions but highly inefficient in scheduling instruction over a period of days or weeks. Long-term organizational and administrative efficiency of the teacher may be obtained by:

$$E_f = A_t \quad \frac{T_t C_t}{T_t C_t}$$

where A_t is the total number of behaviors acquired by the learners, C_t is the total number of instructional cycles completed by the teacher, and T_t is the total amount of time (including non-instructional time) during which the teacher has been responsible for the learners' education.

Clearly, our formula, which suggests the development of empirically researchable hypotheses related to teacher-effectiveness, provides a framework for quantitative analyses of educational performance. A factorial analysis of teacher x method x child x task interactions obviously is feasible. Such an analysis would suggest the conditions of maximum learning for the child on an empirical rather than a subjective basis.

The formula allows objective analyses of teaching at any point in time. It is assumed that before any instructional program is begun, the learner will be given an objective performance test related to the instructional goal. On the basis of his performance on that test, his entering behavior, Be, is established. Presumably the child has acquired all skills requisite for learning the first behavior represented by Bc-Be. At any point in the instructional program, a criterion test can be administered to establish his current repertoire, Bc. If time spent in instruction and the cumulative number of instructional cycles performed have been recorded, E can be computed at that point. Thus, the teacher's effectiveness may be monitored on a daily basis or over an extended period of time.

Because an instructional unit (C) is defined as a cycle of events, a detailed analysis of instructional methods is possible. Becker, Englemann, and Thomas (1971) have suggested a greatly expanded S - R - S model for teaching tasks. If the components of C are specified, a functional analysis can be made of attention signals, prompts, reinforcers, and other variables influencing teacher-effectiveness. When an analysis of specific teaching method variables is desired, the effectiveness formula may be written:

$$E = A \frac{T \quad Sa - R - Ss}{T \quad Ss - R - Ss}$$

where Sa, R, and Ss components of C are stated explicitly. Systematic variation of instructional methods can then be evaluated by effects on the E ratio.

The statistical distribution of E ratios is now only a matter for speculation. Regardless of its distribution, however, it is safe to assume that E_x for a given teacher will become more stable and representative of her true effectiveness as the number of different children to whom she teaches a task increases. Furthermore, as teacher-effectiveness and instructional methods become established, the relative influence of other variables impinging upon the learning process can be more easily assessed. Present formulations of learning ability (IQ) ignore variance contributed by the effectiveness of the teacher and instructional methods. If the variance attributable to the teacher and method could be extracted, then it would be possible to predict what the child will learn under specified conditions and to compare that prediction with the child's achievement. The result would be a meaningful learning ratio.

It was found in the Evaluation MOdule that the students were capable of recording the data necessary for computing an effectiveness ratio while they were instructing one child. Kauffman (+ Hallahan) later applied the Teacher Effectiveness Formula in a research setting. The teacher was a graduate who had been in the partial implementation phase and was well acquainted with the Formula. It was again found to be a feasible means of measuring effectiveness.

Child Development Center.

One of the purposes of the University of Virginia Early Childhood Special Education Program is to develop both a performance-based teacher education program at the Master's level and a child education program for children from birth through approximately age seven.

To fully implement this teacher training program it became necessary to provide a model where students may, on a continuing basis, observe a developmental competency-based child program in operation and also a laboratory where the trainees may practice diagnostic skills and environment setting skills and to develop their effectiveness in working with young children. The University of Virginia Child Development Center served as such a model. A major purpose of the model laboratory is to demonstrate that children of multi-age and multi-abilities can be effectively enriched in the major areas of child development while in the same physical environment. The UVa Child Development Center conducted two daily sessions consisting os 12 children each ranging from 2 to 6 years of age. The children ranged from normal in development to multi-handicapping conditions. There were 30% delayed, 30% non-while children and children representing each age category in each session. Some of the parents of the children were involved in field testing the parent education training program.

Parent Education Program.

The proposed model Parent Education Program was in its developmental year. The program as indicated in the initial proposal was designed for parents of preschool age children. The program was developed in terms of self-contained learning modules. The modules were designed such that the parent education program could and would be taught by the early childhood-special education students to the parents of the children enrolled in the laboratory school.

In order to insure a broad base of input concerning the content of the program, personal interviews were conducted and taped with 35 of the most renowned child psychologists and clinical child psychologists in the United States. From this pool of information major themes were selected for the curriculum of the parent-education program. This revision was consistent with the data based orientation in which feedback and new data will lead to revision and refinement of the program throughout all of its development.

Each module was so designed that they are self-contained units which take approximately 1½ hours to complete. In addition to participating in the training modules the parents would be given a 15-20 minute homework assignment each week. These assignments are aimed at supporting the modules and delivering certain cognitive information. The reading level was kept at the level of a local newspaper.

Evaluation of Phase II.

Other than the testing of the teacher effectiveness formula the only other type of evaluation that occured during the Phase II was of a formative nature.

Structured interviews with each of the students was conducted by the co-directors after the first two modules and after the third module. The purpose of these interviews was to gain evaluative feedback from the trainees regarding the content of the modules as well as the operational procedure of the modules. The interviews were thus designed as a form of evaluation of the program.

One of the major findings obtained from these interviews is that the students have, in general, spoken well of the modules. They have particularly been enthusiastic about their extensive and intensive contact with children.

It was also learned, however, that the use of video-taping must be coordinated closely with immediate feedback to the students. During the first two modules, because the video-taping was done out at various field centers, the students were not given enough feedback on their teaching. By the time the tapes all gathered and viewed, the students were already into different kinds of experiences. The large amount of video-taping at various sites thus prohibited instant feedback. The video-taping was thus not fully understood by the students and it became somewhat of a threatening experience for them. In the third module, however, the students were quite enthusiastic about being video-taped. There was actually less video-taping, but it was all done at one site (the Child Development Center). The students received immediate (ranging from one or two minutes to later in the day) feedback regarding

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teaching. The students became comfortable in this situation presumably because they perceived it in the context of helping them refine skills rather than purely an evaluative process.

It was concluded from these experiences that the video-taping, to be most effective, should be coordinated so that it can be used for immediate feedback purposes.

In addition to these interviews, other significant events that have taken place relate to the construction of evaluation forms for the process of teaching. The teacher effectiveness formula was developed for rating the students on the directive and behavior modification processes. Whereas the video-taping during the Developmental Process Module did not provide trainees with instant feedback, it was of of inestimable worth in identifying the relevant teaching processes to be rated in this module. As this process has never formally been identified in the literature much time has been spent identifying the process so it can be measured.

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PHASE III

Phase III (1973-74) involved to implementation of the Early Childhood-Special Education Program. This consisted of the language product modules (language development overview, auditoren perception, phonology, semantics, syntax and reading readiness) and three process modules (developmental, directive and behavior modification) that were field tested in 1972-73 and the cognitive, perceptual motor, attending, self-help, individuation and behavioral adjustment to society product modules that were field tested for the first time.

The child education program for children birth through approximately age seven was implemented with two to six year old children in the Child Development Center. The curriculum was fully implemented for the first time during 1973-74. (See Monograph II for complete decription of implementation).

The Parent Education Program that was developed during Phase II was implemented with the parents of the children enrolled in the Child Development Center. A graduate credit course was offered to all field center personnel which met over the nine month period in order to enhance effectiveness of the field experiences.

The evaluation of Phase III considered the effectiveness of the toatl program.

Field Center Experiences.

In this project practicum sites are referred as field centers. Three centers were identified for the prototype year. These centers represent three distinct types of environments found in early childhood education, those being day care, public schools, and a specialized child development center. The staff of each center was enrolled in a nine month seminar to coordinate the training program with field center activities. They received academic credit from the University for this seminar.

UVA Child Development Center. One of the purposes of the University of Virginia Early Childhood-Special Education Program is to develop both a performance-based teacher education program at the Master's level and a child education program for children from birth through approximately age seven.

To fully implement this teacher training program it becomes necessary to provide a model where trainees may, on a continuing basis, observe a developmental competency-based child program in operation and also a laboratory where the trainees may practice effectiveness in working with young children. The University of Virginia Child Development Center serves such a model. A major purpose of the model laboratory is to demonstrate that children of multi-age and multi-abilities can be effectively enriched in the major areas of child development while in the same physical environment. Since it is the purpose of this training program to provide teachers who can assist the development of all children and not just those in the "normal range" of motor, visual perceptual, social, cognitive, and language skills model at

environment where this occurs is mandatory. The UVA Child Development Center has two daily sessions consisting of 12 children each ranging from 2 to 6 years of age. The children range from normal in development to multi-handicapping conditions. One third of the children in each session demonstrate an obvious developmental delay in some area of development.

Janie Porter Barrett Day Care Center. This is a community sponsored day care center that has been operating for 39 years. It has 60 children, ranging from 2-6 years of age and four full time staff members. All but tow of the children are Black. The children are mostly from the lower socio-ecomomic class and several demonstrate developmental delays of some type. Dr. Mann serves as head of the Education committee on the Barrett Advisory Board. The center has day care accreditation.

Johnson Elementary School. This center provides public school experiences in grades K-2 as well as certification practicum for NK-2 State of Virginia certification. This field center presently has three teachers - each in kindergarten, first and second grade.

Parent Education Practicum. The students in this program observed a model teach a group of parents during the Fall academic semester. In the Spring semester they taught a parent program in a team situation comprised of two students. Parents for the groups are parents of the children in the field centers. There are approximately 15 sessions for a complete parent program.

Integration of practicum with learning modules. Students will spend 8 weeks in each of the practicum settings. They practice skill development being emphasized in the module they are in at that time and also provide experiences typical to the particular field center - e.g. teaching reading groups in second grade to playgound duty at the day care center. The staff in each center have identified the experiences that are typical to their environments that the trainees should learn to provide (see Performance Based Early Childhood-Special Education Teacher Preparation Program; overview, Monograph I for complete description). All trainees are in the Child Development Center for the first few weeks before going into the following pattern:

	1st 8 wks	2nd 8 weeks	3rd 8 wks
Johnson	1,2,3	7,8,9,10	4,5,6
JPB Center	4,5,6	1,2,3	7,8,9,10
CD Center	7,8,9,10	4,5,6	1,2,3

This way all students observe, participate, and work on developing teaching skills in each center for approximately eight weeks. Student placement within each center is according to his/her specific needs.

In each classroom a developmentally delayed and a normally developing child are identified by the students during the first practicum

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week in the Fall semester. Baseline data is collected on each for a week and then the student designs conditions each day for these two children. When the student leaves after his/her eight week stay in the practicum the student who comes in next picks up the same two children. In this way the students as a group follow 10 delayed and 10 normal children for the 26 weeks of practicum.

Students go through the parent education program themselves with an instructor, then observe a model implementing the program with parents, and finally implement the program to parents in teams of two students each. This occurs over the nine month period.

Sequence of Teacher Preparation Program.

Following is the sequence of the Early Childhood-Special Education Teacher Preparation Program. Each module is presented in monograph form of this report so a discussion of the modules is not given here.

Performance Based Early Childhood-Special Education Teacher Preparation Program: Overview

Developmental Process
Directive Process
Behavior Modification
Language Development Overview
Language Development: Auditory Perception
Language Development: Phonology
Language Development: Semantics
Cognitive Development
Language Development: Syntax
Language Development: Reading Readiness
Attending Development
Perceptual Motor Development
Social Development: Self Help Skills
Social Development: Individuation
Social Development: Behavioral Adjustment to Society

Parent Education Component of the Performance Based-Early Childhood-Special Education Teacher Preparation Program.

The School of Education Child Development Center exists as a training setting for teachers of young children. This teacher preparation involves the training of these teachers to work with parents whose children attend the CDC in the area of child rearing skills.

Following in a description of the traing experienced by ten graduate students participating in the Parent Education Component of the Early Childhood Program from September 1973 through May 1974.

Overall content of the training program for the 1973-74 academic year. The program format included the following:

Phase 1: September 13 - October 9: Early Lectures*

Phase 2: September 20 - December 20: Observation of Parent Education Groups

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Phase 3:	October 11 - November 6:	Group Discussion of Teaching Modules
Phase 4:	November 8 - December 6:	Simulation Exercises with Feedback Sessions
Phase 5:	January 17 - February 21:	Student Planning Sessions for Parent Education Groups
Phase 6:	February 25 - May 10:	Student Led Parent Education Groups with Feedback Sessions

*Derived from the Parent Training Handbood written by R.R. Abidin during the September 1972 - August 1973 period.

See Monograph III to this report.

Major components of the training program: Phase I. early lectures

Beginning on September 13, 1973, the students met with Dr. Richard Abidin and Mrs. Carol Gates for 1½ hour sessions twice a week for four weeks. Lectures based upon the first six teaching modules were presented which dealt with key ideas in child development theory.

It became evident by observing the students' group behavior during these early sessions that they were not participating from inner motivation or personal choice. Some appeared bored, few raised questions about the material presented, and in general avoided verbal and non-verbal interaction unless pressed.

Only when the awareness of their behavior was openly expressed by Dr. Abidin and Mrs. Gates, did the students assume responsibility for their feelings of resentment and began to share more readily, so that more of their individual needs became known and could be incorporated into the training process.

The key issues raised by the students were:

(1) They were unaware that a Parent Education program would be part of their training.

(2) The parent program seemed to be an extra which was not reflected in course credits, but which required as much time as any of their other training activities.

(3) Four students came to the conclusion that they were not interested in work with parents.

(4) The initial lectures were presented in an overly simplified fashion.

(5) Students wanted greater control on the direction of discussion.

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Phase II. Observation of parent education groups. On September 20, 1973, the students began to attend evening sessions (7-8:30 P.M.) once a week for thirteen weeks to observe one of two parent education groups which met back-to-back in two 1½ hour sessions led by Dr. Abidin and Mrs. Gates. The parent education groups met in a room with a two-way screen and individual audio input of the discussion for each student. Prior to the beginning of the 1973-74 project year the parent program was discussed with all parents and all agreed to participate.

Group A (observed group) consisted of six parents of children enrolled in the Child Development Center who had agreed in writing to attend the Parent Education Program as a condition of their child participating in the program. Their attendance was sporadic and their involvement, motivation and personal need for these sessions appeared minimal. Lecture format was readily replaced by discussion and skill practice after the first two meetings and feedback was encouraged. Attempts to establish group rapport and cohesion were only partially successful primarily due to the factors mentioned above.

Group B consisted of seven parents who "voluntarily" sought participation through the sponsorship of the community Y.M.C.A. and were charged a nominal fee.

This group actively participated in the sessions, expressed enthusiasm with and support of the teaching material and group interaction experiences, and attendance was regular.

Although Dr. Abidin expressed to Group B a felt need for the students to have a more profitable experience from the learning standpoint, one or two of the members did not feel good about being observed, so unfortunately this group was not observed by the students.

Feedback discussions of the behaviors observed in Group A were incorporated into the afternoon sessions previously described. Despite the relatively poor group cohesion of Group A, Dr. Abidin and Mrs. Gates were able to model a wide range of group leadership style and coping behaviors which formed the substance of most discussions. The Early Childhood student interest in group leadership and management began to increase as the time grew closer to the planning for their own Parent Education Groups.

Phase III. Group discussion of teaching modules. As a result of an evaluation questionnaire given to the students after the first month (14 training sessions) of their program, the format for the afternoon sessions changed from lecture orientation to an open discussion of the rest of the teaching modules. Outside readings in related areas of child development theory, rational behavior theory, and group leadership skills were also discussed during this time.

As the students began to express concern and ambivalent feelings toward this part of their training experience as well as personal doubts with regard to their overall learning program, they also began to: share more readily, appeared more relaxed during the sessions, increased their verbal interaction, and finally gave some constructive

feedback about the teaching modules which led to helpful suggestions for changes in format and content.

The results of the evaluation questionnaire were obtained by having each student complete his questionnaire anonomously and then two of the students pooled the data in the form indicated below with the original questionnaires being destroyed.

Results of Parent Education Questionnaire Administered to Graduate Students.

1. I was aware that the Early Childhood Program would include training in Parent Education when I applied to the Early Childhood Program.

   Yes 0 No 10

2. Parent Education as a possible professional activity for me in the future holds

   a great deal of interest 4.
   little interest 3.
   no interest 2.
   undecided 1.

3. I perceive the Parent Education component of the Early Childhood training program as being viewed by the overall faculty as having major importance 2 little importane 7 no importance 0 don't know 1.

4. Relative to the other courses and modules in the training program in Early Childhood I believe the Parent Education Program to be of

   major importance 4
   minor importance 4
   no importance 2

5. If I had a choice about my involvement in the Parent Education component as it present exists I would choose to

   drop it 4
   continue 5
   undecided 1

   If you indicated that you would drop the Parent Education Program in question #5 please indicate your answer to item #6.

6. If you had available as instructors for the Parent Education Program the top experts in the field and the program consumed as much time, I would choose to continue.

   Yes 3 No 1

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7. The parent Education component of the Early Childhood Program takes up too much time relative to my schedule.

Yes 8 No 2

8. I would prefer the following format for the Parent Education Program:

___ 1. Lectures only.
___ 2. Lectures and observation of the parent grp.
___ 3. Readings and a discussion group.
9 4. Readings and a discussion group and observation of parent group.
1 5. The present program.
___ 6. Readings and observation of parent group.

9. At this point my overall satisfaction with the overall Early Childhood training program is

largely satisfied ___
somewhat satisfied 5
ambivalent 2
dissatisfied 3

10. My ultimate career objectives are (select one)

clear to me 2
uncertain to me 6
I do not know what I want to do 2

Phase IV: Simulation exercises with feedback sessions. Between November 8, 1974 and December 6, 1973 the students participated in simulated parent education groups designed to demonstrate the major roles found in all groups which provide the basis for their interactional dynamics. They exchanged both leadership and member roles, and were observed by Dr. Abidin and Mrs. Gates through a one-way window. Each week two different students assumed the leadership role. At the end of each simulation exercise they were given immediate verbal feedback which was reinforced by a written summary of observations given to them the following meeting.

Student response to this experience was enthusiastic, mainly because they had felt a real need for practice in group leadership skills as well as dealing with interactional dynamics. They expressed their feelings of inadequacy readily and were very concerned with assuming the leadership of their own parent education groups, a task most of them did not look forward to at that time.

The common major roles found in groups were explained to the students and various roles were assigned to group members during the simulation. The descriptions of these roles may be found below along with copies of the written weekly feedback notes.

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Common major roles found in groups. These roles are played by group members in all groups. In most groups the roles tend to shift with changing topics and days, such that a group member may play opposite roles at different times.

Playboy: In this "antigroup role," I display (quite obviously) a lack of involvement in the group's work. My verbal and non-verbal behavior may take the form of cynicism, nonchalance, horseplay, boredom, etc. I don't care if we get anything done just as long as I'm not bored.

Dominator: In this "antigroup role," I try to assert my authority in manipulating group activity or some individual's behavior in the group. I may try flattery, assertion of superior status or right to attention, giving directions authoritatively, interrupting the contributions of others, etc. (Special Caution: Don't overdo this role to the point where the group can't function at all!) I'm the final word on anything.

Energizer: In this "task role," I try to prod the group to action or decision and act as the "group conscience" reminding the members of the task at hand, what remains to be done with remaining time, etc. I like to keep people in touch with the real world so we can get things done.

Gate Keeping: I help to keep communication channels open and to facilitate the participation of others. I suggest procedures that permit the sharing of remarks and ideas. I try to help bring everyone into the full discussion. I am a traffic policeman.

Opinion giver: In this "task role," I emphasize what might become the group's views of pertinent values. I like to have everyone know where I'm at.

Harmonizing: I attempt to reconcile disagreements in the group, to reduce tension, and to get people to explore their differences in constructive ways. I try to help others in the group to see occasions when they are urging the same point in different ways which are in harmony with each other. I am a peace maker or peace keeper.

Coordinator: In this "task role," I will try to clarify relationships among the various ideas and suggestions. I could point out similarities and overlap, combining those with common purposes, etc. I like to pull things together so we can clearly see interrelationships.

Non-verbal supporter: In this "task role," I don't speak unless spoken to directly. I respond via gestures, facial expresssion, posture, etc. as I try to be "myself" and try to be as creative as possible in my non-verbal involvement as an encouraging and supportive group member. I like to be a traffic director or an orchestra leader as the demands.

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Encouraging: By being friendly, warm and responsive to others, and by using encouraging words to affirm or recognize them, I indicate the acceptance of the contribution made by other members of the group and encourage them to try further to participate in the group. Some-verbal expressions. I am a cheer leader for different people at different times.

Compromising: When my own idea or status is involved in a conflict, I offer a compromise which yields some of my status in return for furthering the group function as a whole. I admit error and modify my position in the interest of group cohesion or growth. I am willing to sacrifice my primary desires for the best interest of the group.

Opinion Seeker: In this "task role," I will try to clarify the values pertinent to what the group is undertaking or values involved in the various suggestions made. I like to know what value there is in doing what we suggest.

Information Seeker: In this "task role," I will attempt to clarify all suggestions in terms of factual adequacy and/or authoritative information and pertinent facts. I like to have things perfectly clear.

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SUPERVISORY NOTES

SIMULATED PARENT EDUCATION GROUP

R. R. Abidin
C. Gates

11/8/73
SESSION 1

Observed behaviors	Impact-observed	Suggested coping technique
1. leader avoids eye contact with disruptive member	disruptive member got worse behavior out of control	draw him in to get his agenda surfaced
2. leader tended to speak and hold eye contact to supporters only	other members passive sub-grouping occurs more easily	make effort to have eye contact regularly with all group members
3. basic RET concept not taught with powerful situation via diagram	members expressing confusion vagueness of understanding evident	go through analysis with powerful example (blind man on subway) to refer to later on
4. Nonsupportive co-leader letting leader "hang there" at intervals (non-supportive)	burden of maintaining climate felt by leader alone - under pressure to deliver content plus handle process	supportive leader should try to employ & model all positive group facilitating roles; monitor group reactions
5. group member expresses positive feelings and feedback to leader	leader only responds to his content which dilutes full impact of his sharing feedback (partial acceptance only)	could reflective listen, then. give a sharing response of positive impact of feedback to reinforce it.
6. group members really trying out roles	process of group flowing fairly well	continued practice in role playing to increase impact of roles on group process

R.R. Abidin
C. Gates

SUPERVISORY NOTES

SIMULATED PARENT EDUCATION GROUP

11/13/73
SESSION 2

Observed behaviors	Impact-observed	Suggested coping techniques
1. content well organized, basic information presented, in easily understood format	group members attentive and comments suggested understanding and applicability	----------
2. leader refocused attention of group members to task at hand when comments got too far afield by her hand gesture or pointing and her words.	all faces turned to blackboard when leader gestured with her to clarify points of content on agenda	----------
3. leader defined "problems" in behavioral terms when asking for shared home experiences to relate content, (e.g. "behaviors of their children which they didn't feel all that good about. .")	members responded by sharing "problems" experienced at home (volunteered more freely)	----------
4. leader modeled reflective listening to member exhibiting "antigroup" role in early stages of non-verbal negative behavior.	began to draw this member into verbal participation in the group which extinguished the disruptive non-verbal behavior initially	----------
5. leaders having a problem, enlisting negative members interest in solving goal of learning shared by other group members	other group members looking to leaders to control this problem. Becoming irked with negative member's antigroup behavior	as this becomes more extreme leaders need to give antigroup members feedback as to the impact of her behavior on group goals - antisocial destructive input inpinges on needs of the group, etc. parents expect leaders to assume control and not allow antigroup member to interfere with group goals

R.R. Abidin
C. Gates

SUPERVISORY NOTES — SIMULATED PARENT EDUCATION GROUP — 11/13/73 SESSION 2

Observed behaviors	Impact-observed	Suggested coping techniques
6. supportive group member expresses positive feedback to group about impact of the relevance of content to his personal home experiences	enthusiastic acceptance of his remarks which tends to reinforce this behavior which encourages other members to share in this way	----------
7. leader draws non-participating group member into the group by giving her the opportunity to share a personal experience related to specific content	group member related a personal situation fairly quickly and calmly (did not seem to have been "forced into it")	----------
8. supportive leader evaded answering a direct question by group member	group member asking for specific personal response to question seemed put off	could have given a "sharing yourself" response initially, then give a reflective listening response to explore what may have been "underneath" group members actual question. (may have been a hidden agenda or real area of concern, etc.)
9. group members getting into "roles" but having difficulty resisting impulses to "keep it going" every second.	group process flowing actively but not enough natural pauses for silent reflection, etc. A bit too eager to fill up every pause.	each group member take responsibility for this problem for "self-talk" such as "It's OK for me not to react to the pressure to say something during moments of silence.

SUPERVISORY NOTES — SIMULATED PARENT EDUCATION GROUP — 1/15/73 R.R. Abidin — SESSION 3 C. Gates

Observed Behaviors	Impact-observed	Suggested coping technique
1. Leader asks questions but doesn't give time for response.	Group is quiet.	Need to pause at least 10 seconds after a question.
2. Material not organized so that major points are made.	Question whether group will be following you.	Clear examples.
3. Leader talking at a very rapid rate, talking 95% of time. No eye contact	Difficult to follow ideas. Turned off behavior on part of group.	1. Leader needs to focus on relaxation. 2. Co-leader needs to help. 3. Ask questions and pause. 4. Increase eye contact.
4. Co-leader supports leader by elaboration: slower rate of speech.	More interest on part of group members.	----------
5. Groups talk about child being lazy.	----------	Leader needs to help define, what does it mean, what behavior lead to that conclusion. Alternative views or explanation.

HALF TIME — NEW GAME PLAN

1. Rate of speech slower.	Attention of members markedly up.	----------
2. Eye contact increased. Must be increased more.	More members looking at leaders.	Leader should use a tight circle to increase direct eye contact.
3. Parent refusal to do task.	Leader ignores her.	Ask her to share feelings or reactions to the request
4. Leader needs tight circle.	----------	----------
5. Leader pausing longer and reinforcing more.	More group involvement.	----------

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SUPERVISORY NOTES

SIMULATED PARENT EDUCATION GROUP

SESSION 4

Observed Behaviors	Impact-observed	Suggested coping technique
1. Leader gives members overview of material to be covered	members can anticipate mutual expectations for the session	
2. Structured chairs in tight circle right next to blackboard	lots of eye contact more chance for sharing non-verbal communication	
3. Group member expresses initial confusion, leader unsure of how to clarify point and asks supportive leader for help	modeling "inter-dependence" which minimizes expected "authoritarian" role of leader by group	
4. Supportive leader speaks slowly, has good eye contact and meets group members need for clarification.	member reassured by her response, communication is kept open	
5. Leader listens empathically good eye contact, nods head to communicate, understanding and asks other group members for their ideas on questions brought up	group process flowing involved member participation balanced good climate for mutual sharing and cooperative effort	
6. Leader positively reinforces members contribution verbally ("That a good point", etc.)	increased participation of members responding to their own concerns confusion-not just relying on leaders	
7. Leaders tolerate silence, natural pauses occur without increased anxiety	members thoughtful, relaxed during pauses not looking at leader expectantly	

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SUPERVISORY NOTES	SIMULATED PARENT EDUCATION GROUP	SESSION 4
Observed Behaviors	Impact-observed	Suggested coping technique
8. Leaders "allowed" disagreement between members to occur spontaneously	used this energy is a "catalytic" way so discussion was lively relevant; led to increased understanding of material	
9. Halfway through session leader asks only member who has been silent if she had any questions, etc.	member expresses feeling state, seemed glad she was finally noticed	every five minutes leaders could focus their awareness on each members responsiveness and level of participation so isolation, boredom, etc. can be attended to as it's occurring
10. Leaders don't stifle "hidden agendas" of individual members in the group	these are surfaced, dealt with and put in a perspective relationship with material to be covered. Members feel they have contributed to group goals.	

SUPERVISORY NOTES

SIMULATED PARENT EDUCATION GROUP

R.R. Abidin
C. Gates

11/29/73
SESSION 5

Observed Behavior	Impact-Observed	Suggested coping technique
1. Smile expectantly	member responses	---
2. Member not paying attention	leader tries to get involved by having member read from board.	not have him read from blackboard but explain what he thinks it means.
3. Note members welcomed	helped put them at ease	---
4. Level presentation too abstract. Not getting to the point	not evoking personal responses but rather very intellectual responses. parents can't see importance of idea	need concrete examples. help parents recognize the difference
5. Leaders are using close ended yes or no questions.	class members give yes or no or short answers	use open ended questions, i.e., "what do you think? what ways might we use this?"
6. Presentation ask people to judge ideas presented	increase tension level of group	have parents express how they would try to achieve the objective suggested. when they have exhausted their ideas make any suggestions they haven't reacted to.
7. Can you think of any other ways you can expand your child's language?	produced a thoughtful response	excellent question
8. Bev asked why better with this method?	shows members not convinced method is important	must get importance of idea communication and the likely impact
9. Language level very abstract.	hard to follow some parents	language level must match educational level of group members.

SUPERVISORY NOTES	SIMULATED PARENT EDUCATION GROUP	11/29/73 SESSION 5
Observed Behavior	Impact-observed	Suggested coping technique
10. Eye contact and quality of listening by leaders		very good
11. Leaders tried to involve members - but used "asking a direct question" technique or reading portion of blackboard	little or no response which got them really involved	could try sharing with them your need for feedback to "check out" their silence or ask them what they are thinking or feeling about content of material (relevance, etc.)

Phase V: Student planning sessions. On January 17, 1974, the students began to plan and organize their teaching content and leadership styles for the parent education groups which were scheduled to begin at the end of February. They each selected a partner to work with for shared leadership responsibility, and met with Mrs. Gates in bi-weekly, 45 minute sessions for support and guidance.

They openly expressed their feelings and concerns, assumed full responsibility for their own teaching content and leadership style, and discussed ideas for the sequential development of their programs. By this time, it seemed evident that they had "accepted" this task as a required learning activity, minimized the negative "expectational role" aspects of running their groups, communicated openly and directly with each other, and at times even expressed positive anticipation for this experience.

Mrs. Gates formed three groups of parents whose children were enrolled in the Child Development Center, and scheduled the meetings nights in accordance to their personal preferences.

Group 1 included eight parents, Group 2 had seven parents, and Group 3 consisted of six parents, two of whom never actually participated. Two students were assigned to Group 1, three students to Group 2, and two students were assigned to Group 3. Three of the students were not able to participate in this part of the training program for personal reasons.*

*This issue will be dealt with in the final section of this report.

Phase VI: Student led parent education groups. The last phase of the training program began on February 25, 1974 in which three Parent Education groups were led by the students for six weeks. The groups were made up of parents whose children were currently enrolled in the Child Development Center and varies in size from six to ten members including the student leaders. They met one evening a week and the sessions usually lasted for 1½ hours and were observed by Mrs. Gates for an immediate 30 minute feedback and evaluation session based on notes similar to those developed during the simulation sessions of Phase IV.

Group 1 had fairly regular attendance, the members shared the responsibility for discussing the teaching material by spontaneous sharing and questioning behavior which contributed to a good climate for group interaction and learning. The student leaders modeled valued behavior for the group members by the effective use of reflective listening, overall acceptance, and "sharing yourself" responses.

Group 2 had fairly good attendance in the early meetings which gradually slacked off to only two parents for the last two sessions. Educationally, most of the parents had advanced degrees, were academically and intellectually oriented, and were exceptionally well read in the field of the teaching material presented.

The student leadership "triad" felt uncomfortable with this particular group of parents, and did not have adequate training to deal with their interactional behavior, but coped with the reality of the situation in a mature, reasonable, non-defensive and rational manner.

It was obvious that these parents would not have actively involved themselves in this particular program by choice, since they openly rejected the focus of the teaching material but didn't contribute much to the overall climate when the leaders tried a "problem-solving" approach to this situation.

Group 3 had almost perfect attendance and enthusiastically participated in the learning experiences provided by the students. Emphasis was on parent involvement and positive reinforcement behavior by the student leaders brought about observable changes in a positive direction in verbal responsiveness and increased member participation. These parents chose their own "at home" projects to integrate the learning materials with their own skill development and appeared stimulated and involved most of the time they were in the group sessions.

During the feedback sessions immediately following the group meetings, Mrs. Gates went over both the content and process of the group as observed by her, and dealt with the students feelings and reactions with regard to the parents verbal and non-verbal behavior as well as their own.

Although responses were somewhat mixed, most of the students expressed good feelings about this phase of their program as both a positive personal growth experience and as a useful body of skills and knowledge.

The range of final student opinion concerning the Parent Education Program.

1. "The parent education module was a terrifying prospect and a most fulfilling experience. Parent/teacher relations are a vital part of the teaching experience. This was a good introduction.

   I would like very much to have a Parent Education Group perhaps at the beginning of next year (January 1975) in behavior modification techniques for interested parents."

2. "As far as professional knowledge and skills, I feel very inadequate and unqualified. I feel that the subject matter was important, but was meaningless to this set of parents, and therefore, a complete waste of time. I think that the parent group was not a good experience for the parents or students involved in this particular group, and that the greatest reasons for failure was forced participation on both sides, and the highly professional backgrounds of all the parents, and the lack of appropriate training in group dynamics on the students' part.

   In considering personal growth, I can only recall the disappointment, frustration, and general hostility of six or seven sessions, and I have grown wary of accepting "required" tasks for which I have no skills."

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Final critique of parent education program by the Director. During the two years that Parent Education was a component of the Performance Based Early Childhood-Special Education Teacher Preparation Program significant progress was achieved. First, a complete set of training materials were developed and secondly, one group of students was sent through the program. The need to revise the training materials, methods of instruction, and selection of students becam obvious as the project was put into operation. Changes in the first two factors were made, as is reflected in the preceding portions of this report. Student selection represented one of the most serious weaknesses of the project. The overall level of personal adjustment, ego strength and mature rational functioning fell in the pathological range for 3 of the 10 students, with 2 of the remaining 6 displaying below average adjustment. These judgements were made by the project director who is a licensed clinical psychologist and who has over seven years experience in teacher and graduate education. They were supported by professional communications from psychologists and psychiatrists during the project concerning the students in the project who were under their care.

It appears obvious that careful screening must be conducted on candidates for any early childhood teacher training program which plans to have the teachers work with parents. The age and experience base of the student and prospective parent educators would seem to be a very important consideration. The acceptability to self and parents of the role of Parent Educator for a 21 or 22 year old in many cases is very low. The personal adjustment level in terms of ego strength, strength of self acceptance and general maturity must be carefully examined in each candidate. The danger is that some individuals seeking involvement in the area may see working with little children as a "safe" occupation where they are by size and age at a competitive advantage over their charges. In one or two cases the reason for involvement in the early childhood program appeared to be solely the availability of fellowship and tuition support money. It is also interesting to note that two of the ten students who were involved in a highly specialized masters degree program in early childhood special education did not know what their career objectives were and another six out of the ten were uncertain as to their career objectives.

The length of time the Parent Education module ran (September 10, 1973 to May 1974), the amount of reading involved, and the time requirements for training sessions and group observations suggest that this portion of the program should have been handled differently in terms of the administration of the overall program. In the eyes of the students the parent education program was an "extra requirement" for which they earned no credits. Other shorter and less involved modules were considered part of the regular program and generated grades and credits.

In conclusion it would appear that the Parent Education Program which only ran for the last two thirds of the project produced some degree of success; specifically a Parent Education Handbook was developed and the structure and bugs in the system were identified. It is unfortunate that a third year support was not available for the Parent Education Program.

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Evaluation of Prototype Phase

The evaluation of the Performance-Based Early Childhood-Special Education Teacher Preparation Program consisted of three parts: a module by module evaluation by each module instructor, presentation of subjective student trainee opinion, and overall comparisons between students in the training program and similar students in traditional early childhood and special education programs.

Each of the fourteen sequential teaching modules were evaluated by their respective instructors. These modules were as follows: (1) Program Overview Module; (2) Developmental Process Module; (3) Directive Process Module; (4) Behavior Modification Process Module; (5) Language Development Overview Module; (9) Attending Module; (10) Cognitive Module; (11) Syntax Module; (12) Reading Readiness Module; (13) Motor Development Module; and (14) Social Development Module. Separate evaluations were conducted in each module to determine whether each student had met the learner objectives set forth at the beginning of each module.

Periodic interviews were conducted to assess students' reactions, attitudes and expectancies for each module and its instruction. These generally followed the completion of each module, except in the case of the Parent Education Program, which was evaluated throughout its duration and which has a separate evaluation report to follow the other module reports. Interviewing seemed necessary for program improvement to meet the needs of the students enrolled in the experimental Early Childhood-Special Education Program.

The students in the experimental Early Childhood-Special Education Program were each placed in three field settings during their year-long experience. These placements included a University laboratory school, a day care center, and a public elementary school. Each of these placements were for eight-week periods. During these times, the students were frequently observed by experienced teaching supervisors who evaluated them on a standard teaching form used at the University of Virginia. These evaluations were completed at the end of each eight week period for every student in the experimental program, and were conducted in order to assess each student's ability to perform as a teacher.

At the end of the academic year an overall project evaluation was conducted. This was done in order to compare the experimental Performance-Based Early Childhood-Special Education Program with more traditional programs in both Special Education and Early Childhood, already in progress at the University of Virginia. This was deemed necessary because the students in the experimental program had not been exposed to the traditional course experiences typical of other masters degree candidates at the University. Also, it was felt that an overall evaluative comparison would demonstrate whether or not the experimental program really taught skills commensurate with those taught by the more traditional programs in Early Childhood and Special Education.

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Procedures for the selection of comparison groups. Each of the ten original trainees in the Performance-Based Early Childhood-Special Education Program at the masters level (experimental group) was equated as closely as possible with a student from each of two control groups. Control group 1 was composed of ten Early Childhood students who were enrolled in a more traditional masters degree program. Control group 2 was composed of ten Special Education students, approximately equally distributed between programs for teachers of the learn-disabled, the emotionally disturbed, and the mentally retarded. These teacher training programs were also more traditional in orientation. All of the students in the initial experimental and control groups were in attendance at the University of Virginia during the 1973-1974 academic year.

Control group 1 was selected on the basis of expected time of graduation, which was approximately the same as that for the experimental group. Only ten such students initially appeared appropriate for this sample. Control group 2 was selected from a far larger pool of students enrolled in masters level programs as described above. Only students who were in full time attendance at the University of Virginia and whose expected date of graduation was the same as that of the members of the experimental group were considered for control group 2.

Detailed information on each student in the experimental group, and control groups 1 and 2, was collected from files available in the registrar's office in the Education School of the University of Virginia. This information included the following variables: age; sex; undergraduate institution; undergraduate major; grade point average (G.P.A.) for all undergraduate work; G.P.A. for the last two years of undergraduate work; previous masters degree area (if any); Graduate Record Examination verbal score (G.R.E.-V.); Graduate Record Examination quantitative score (G.R.E.-Q.), Graduate Record Examination Advanced Test area; where available, Graduate Record Examination Advanced Test score (G.R.E.-A.) and Miller Analogies Test score; number of years of previous teaching experience; and type of previous teaching experience. Since complete information was not available for every student and there was some unavoidable overlap between categories, only the following most representative and/or relevant variables were used.

Initially an attempt was made to equate all students on the basis of three Graduate Record Examination Scores (G.R.E.-V., G.R.E.-Q, and G.R.E.-A.). However, because Graduate Record Examination Advanced areas are often non-comparable, the G.R.E.-A. score was eliminated from consideration. Measures of previous G.P.A. were often non-comparable between students because of their varying course content and undergraduate institutions, thus G.P.A. measures were also excluded from consideration. Since information on all variables was not available for every student involved, the following variables were excluded from consideration: undergraduate institution and major area, Miller Analogies Test score, and quanitative variables such as sex and race. Previous teaching experience was deemed useful for selection purposes, and previous masters degrees were taken into consideration, although the areas of specialization were quite different for those few students with such experience. Thus, the major selection variables used were G.R.E.-V.

and G.R.E.-Q. absolute scores (percentile ranks were not available), number of years of previous teaching experience, and previous masters degree, where applicable. These variables were used in the initial selection of students for the experimental and control groups done in the Fall of 1973.

Since the actual program comparison was not conducted until the end of the Spring semester of 1974, some changes in original group membership occurred. By this time some attrition had occurred in all three groups used in the comparative evaluation, and the number of students in the experimental program had been reduced from ten to eight. Control group 1 constituted a major problem, since several of the originally selected students were unable to participate, and several new control subjects had to be selected. Due to the limited enrollment of students in Early Childhood Education, some part-time students in this area were asked to participate in the evaluation, although preference was given to full-time masters degree candidates. These students were selected as carefully as possible on the four major variables considered above. Control group 2 constituted a lesser problem, since there were far more students available for potential participation. Despite the problems stated above, an adequate number of replacement students was available. Again, G.R.E.-V., G.R.E.-Q., number of years of teaching experience, and previous masters degree (if any) were the variables considered.

Instruments for overall comparative program evaluation. Because a comparison of the experimental Performance-Based Early Childhood-Special Education Program with more traditional master degree programs in Early Childhood Education and Special Education taught at the University of Virginia was desired, dependent measures which would tap learning in a number of areas were needed. It was decided that tests which would assess knowledge of Early Childhood Education material (independent of the experimental program) and Special Education material (independent of the experimental program) were appropriate. Since many of the students in more traditional programs also take course work which is seemingly unrelated to actual teaching competency, a test of general educational knowledge was also necessary for a valid comparison. Finally, it was felt that a videotape test assessing visual identification of teaching techniques by using actual examples of teacher-child interaction would be the best means of tapping the performance-based aspects of the experimental program as compared to the more traditional programs which seem to stress academic competency to a greater extent.

Four testing instruments were devised to measure the relative academic strengths of the experimental group as compared to those of the two control groups. These four tests were: (1) a General Education Examination; (2) a Special Education Examination; (3) an Early Childhood Examination; and (4) a Performanced-Based Teacher Examination. All of these were multiple choice tests. The first three were of the ordinary pencil and paper variety. The fourth required that the subjects view a series of videotaped teaching segments and answer questions related to these test sequences.

The first three tests were composites made up of questions derived from tests which had been given in the past in each of the areas men-

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tioned above. The General Education Examination included questions related to the following areas: measurement theory and applications; curriculum development; philosophy and sociology of education; educational psychology including learning theory and developmental psychology; and school law. The Special Education Examination included questions related to the following areas: learning disabilities; emotional disturbance; mental retardation; speech pathology; and visual impairment. The Early Childhood Examination included questions related to: cognitive development; physical development; social development; language development; parent education and participation in the education of young children; theoretical issues; and numerous teaching philosophies and strategies. These tests had 37, 59 and 61 questions respectively.

The Performance-Based Teacher's Examination was an innovative type of test. It was constructed from a number of existing videotapes showing teachers and children in interaction. These tapes were already in existence, having been used to evaluate the trainees in the program on their performance in three teaching processes; developmental process teaching; directive process teaching; and behavior modification. These tapes came from both the 1972-1973 and 1973-1974 academic years. Approximately twenty-five, half-hour videotapes were viewed prior to the construction of the test. Actual segments from these tapes were selected on the basis of content and videotape quality. Several research assistants and professors worked jointly in selecting appropriate segments and constructing corresponding questions. All of the segments which had been selected were dubbed on to three master videotapes, each of a half-hour duration. The segments were of variable length ranging from approximately 30 seconds to three minutes in length. One minute of blank videotape followed each of the segments. After these composites, master tapes were assembled, the questions for each segment were revised and improved. Correct answers were selected by a consensus of judges competent in the developmental process; the directive process; and the behavior modification process. This test originally consisted of 36 questions corresponding to 36 segments of videotape; however, two of these questions had to be discarded due to a problem in videotape and question sequencing. Thus, the tests finally consisted of 34 questions. (Refer to Appendix for copies of the four education examinations.)

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Procedures for overall comparative program evaluation. The four general evaluation examinations were administered during late April and early May of 1974, near the end of the Spring Semester at the University of Virginia. The experimental group took the Performance-Based Teacher's Examination as a group in late April, with the exception of one trainee who was ill at that time. All other students were scheduled for the Performance-Based Teacher's Examination in groups, when possible, and at their convenience. These students were given this examination between May 4, 1974 and May 18, 1974, inclusive. There was a slight difference in the orientation given to the students in the experimental in contrast to the control group for this particular examination. This was deemed necessary due to the fact that many of the tape sequences were taken from videotapes of the trainees in the experimental group from the 1973-1974 years. Other than this, there was no difference between the specific instructions given of the questions used for the experimental versus the control groups. (Refer to Appendix for a copy of the different orientations, specific instructions, and questions.)

The other three tests: the General Education Examination; the Early Childhood Examination; and the Special Education Examination, were given to all subjects between April 29, 1974 and May 18, 1974. Each subject received a packet containing these three examinations. The control group received the following instructions enclosed with their examinations.

You have been selected as a participant in a study to evaluate educational programming at the masters level at the University of Virginia. While your participation is not mandatory, it is hoped that you will agree to participate in the project.

No preparation is required for your participation in this research project. You will be required to take four tests in conjunction with this project, and this is the only requirement. These tests are: (1) a general education examination; (2) a special education examination; (3) an early childhood examination; and (4) a performance-based teacher's examination. All of these tests are multiple choice. The first three are of the ordinary paper and pencil variety. The fourth requires that you view some videotaped teaching segments and answer questions related to these tape sequences.

You have been carefully selected as a participant in this study on the bases of your qualities as a student at the University of Virginia and also your past experiences. Your advisor here at the School of Education is aware of the nature of the study and will be informed that you have been selected as a participant.

We recognize the pressures you may be experiencing in relation to final examinations; therefore, the scheduling of these tests is quite flexible. The performance-based teacher's test is an exception to this, however, since we as researchers must schedule the use of videotape equipment in advance.

These tests will be used for educational programming evaluation only. They will have no bearing on your status here as a university student and will not influence your grades in courses in which you have been enrolled. Also, they will in no way influence your graduation from the University. The only persons who will see your scores on these tests are the evaluators themselves.

In addition to this general orientation, all students were given the names and telephone numbers of persons they could contact in the event that they had any questions about the evaluation of the program or the specific tests involved. The only difference between the previous instructions which were given to the control groups and those given to the experimental group was that these subjects were told that their participation was mandatory. (Paragraph 1, sentence 2 "Your participation is mandatory, and it is expected that you will agree to participate in this project.")

The control groups received their copies of the three paper and pencil tests immediately after they had taken the Performance-Based Teacher's Examination. The experimental group received their copies at approximately the same time; however, this was about a week after they had taken the Performance-Based Teacher's Examination.

Module evaluation. Since each of the fourteen teacher preparation modules was evaluated by its respective instructor, as was the Parent Training Program, there was not a uniform mode of evaluation used for all of these separate evaluations. Generally speaking, all modules were evaluated in terms of whether or not each student had met the cognitive and skill competencies set forth at the beginning of each module proper. Such evaluations were conducted in a variety of ways; however, in accord with the kinds of experiences and competencies each instructor deemed to be desirable for the students in the program. These fourteen module evaluations will be discussed below, as will the evaluation of the Parent Education Program. No specific examinations given for module evaluations will be included, since these may be used in the future for courses taught at the University of Virginia. For eight of the fourteen sequential training modules, either a directive or a developmental process videotape was made. Thus there were eight total tapes for each student, four of which were directive and four of which were developmental in process. These tapes were pre and post module evaluative tapes in the process modules, i.e., each student was taped at the beginning and at the end of the developmental and directive process module experiences. The final tapes for these two modules counted as one of the eight. All of these tapes were viewed by trained observers for evaluation of process teaching competency and content teaching competency, where appropriate. The purpose of taping the processes in the content oriented modules was to determine if the student could transfer process over different content. This will be explained further as each of the separate module evaluations is discussed.

The first module presented to the students was the Program Overview Module. This module was designed to set the stage for the students' year-long activities. The students were oriented to the teacher preparation program in which they would be involved including: the modules they would be expected to complete; the types of field activities in which they would be involved; the general modes of evaluation of their competencies, i.e., videotaping and observation of their teaching while at their field centers and the types of examinations and projects which they would have to complete while in the modules and Parent Training Program; and expectations for their professional development. A cognitive understanding of the rationale and intentions for their preparation was imparted. No evaluation was involved for this initial orientation module.

The developmental process module was highly field oriented, although there were lectures and discussions as part of the module content. There were performance-based judgements of teaching competency in each field center, as well as pre and post videotapes of each student using the developmental process. These videotapes were dubbed onto one master videotape for each student for this module. At the point in the program where instruction concerned this module, actual teaching competency was estimated by subjective judgement. Later during the year trained observers used a standard observer form to judge the adequacy of each student's use of the developmental process.

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These observations were used in a later analysis. (See Developmental Process Module). The module as taught in classroom lectures and discussions was evaluated by an essay-type examination, which assessed cognitive knowledge of the module content.

The Directive Teaching Process Module was primarily oriented towards familiarizing the students with the Bereiter-Englemann process and content, as well as directive teaching without such a structured system. Field observations of the students and performance videotapes were used to assess actual teaching competency as had previously been done in the Developmental Process Module. Once again teaching competency was primarily based upon subjective judgement of the instructors, supervisors, and cooperating teachers. The ability of the students to generalize the directive teaching process across content was a major consideration. An oral examination was given to assess cognitive competency.

The Behavior Modification Process Module differed slightly from the other two process modules in that it was highly similar to a regular course instructed at the University of Virginia, the only real exception being that it was taught over a shorter time span. No videotaping was done at the field centers for this module. The instructor gave quizzes after each chapter of the textbook had been completed. He required that the students complete a project using operant principles in the classroom (field center.) These projects were initially intended to be well constructed in terms of experimental design, i.e., to have a baseline, intervention, post-intervention measure, and some control procedure such as a reversal. Due to the short span of time in which this module was taught, such elaborate projects were not always possible. The students generally targeted a child with a behavioral deviation of some variety and used operant principles to modify the child's behavior. These projects were type-written and evaluated by the instructor. There was also a final examination which consisted of multiple choice questions as did the individual quizzes.

The Language Development Overview Module was designed to give students a basis for studying the processes of language development in normal and atypical youngsters. No videotaping was involved for this module, although the students continued their experiences at the field centers. An essay examination was given to evaluate the students' cognitive competencies for this module.

The Auditory Perception, Phonology, Semantics, and Syntax Modules were designed to give the students understanding of normal and atypical development in each of these areas for young children. Techniques of instruction in each of these areas were also emphasized. Videotapes of the students during the course of each of these modules were made. The students were required to use either the developmental or directive process in each of these tapes. These tapes were once again, evaluated subjectively, as were the teaching competencies of the students involved while they were at their field centers. (See Overview

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Module for field center evaluation criteria.) An essay type examination was given to evaluate each of the student's cognitive understandings of each of the modules.

The Attending Module was somewhat different than the other modules in that it was constructed as a research orientation module. Extensive readings of research articles and literature reviews was required of each of the students. Although all of the students received copies of each of the articles, specific experimental study articles or an extensive research review article were assigned to each student as a specific responsibility. After four lectures in the area of developmental attention, viewed from three different perspectives, the students were required to discuss their articles and have type-written summaries of the key points of these articles. They were required to present their summaries in class for discussion. All of the summaries were assembled and each student was given a copy to serve as a study guide for the final examination. The students were responsible for a typewritten project applying research findings in the classroom (field center). This project had to be well constructed in terms of experimental design in order to be accepted. Baselines or pre-intervention measures, at least on type of intervention using one of the three teaching processes (developmental, directive, and behavior modification processes), and an evaluation of change in the attending ability of the target child, based on the pre-intervention measure was required. The students had to complete an extensive examination on readings and lectures which included essay, multiple choice, and matching type questions. The students were informed in advance of the content of the very general essay-type questions. An item analysis of the multiple-choice and matching questions was conducted and items missed by more than half of the training group were given special consideration. Students who missed questions by over half of the training group were given credit, while those who were correct on these items were given additional credit. Each student was required to evaluate the module and its instruction, for program improvement. A very brief critique of the articles for which a student was primarily responsible was required. In addition, all students had to fill out a standard course evaluation form used at the University of Virginia.

The Cognitive Module was evaluated on the basis of videotapes and field observations as were many of the other modules. Also the instructor required that the students participate in class, do several lesson plans and do a class presentation with an evaluation by peers. An essay type examination was given at the conclusion of this module.

The Reading Readiness Module required that the students select two of the learner objectives, develop activities related to these objectives, implement and assess the effectiveness of these activities. The students also had to describe a reading program ideal for the grade level at which they would be working. At the conclusion of the module, the students were given an essay and short answer final examination, which was scored in a manner similar to the Attending Module

examination (students were given credit for items missed by over half of the training group.)

The Perceptual Motor Module was evaluated on the basis of videotapes and field observation. Lesson plans, a case study, and an essay examination were also used as the basis of cognitive evaluation.

The Social Development (Individuation) Module required that the students develop lesson plans for use in their field centers, write a paper about their own social development and self concept, make up an assessment tool to measure some aspect of individuation, and design a program and classroom environment to enhance the development of individuation. They were also required to answer cognitive questions as an exercise, but no final examination as such was given.

Evaluation of the students performance in each field center was done on the basis of the traditional University of Virginia Student Teacher Evaluation forms. These were found to be inadequate as behaviors were not defined specifically and were difficult to measure. The staff for this program along with cooperating teachers in the field centers attempted to clarify this. The evaluation criteria used can be found in the Overview Module.

Modular student subjective program analysis. At the conclusion of each instruction module, an informal interview was conducted with each student participant. Initially the obtained comments concerning the modules tended to be negative on a wide range of issues. However, as the program progressed and the students became familiar with the purposes of the overall program, these comments became more positive. Because this affective shift occurred from program beginning to end, the comments concerning each specific module are not reported. Instead, the comments originating from interviews conducted at the program conclusion are included below as representative of the subjective analysis of the modular trainee program.

The one unanimous concern was that there was undifferentiated programming for all of the participants in the program. Concern arose because all students would eventually be assessed for evaluative purpose on the same criterion. This feeling persisted even though module instructors informed the participants that adjustments would be made. Trainees continued to feel that regardless of differences in educational background and/or teaching experience, the same training and evaluative structure was provided for all students in the entire program. They felt that the variable of previous teaching experience was an especially important one since student productivity, instructional needs, and pre-program proficiencies would vary in direct proportion to the amount of practical experience each participant entered with. For example, those trainees with more background experience would need less intensive or lengthly academic instruction in certain areas and would exhibit highly productive or efficient teaching behaviors after a shorter period of time. Since the option of differential programming appeared unavailable for minimizing this problem, students initially adopted negative preconceptions concerning total program efficacy.

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Participants also felt that their global orientation to general and specific aspects of the program was particularly inadequate. The lack of a concrete presentation of the program structure, sequencing, and expectancies caused many students to be extremely anxious throughout a large part of the year. Deriving from this general feeling of disorganization, was a concensus opinion that module lengths and sequencing should be reorganized, although there was no consistent agreement on how to accomplish this. Some members felt the length should be shorter while others thought longer, and disagreement arose over which modules should be subject to a change. It is important to note, however, that this variability in opinion was probably highly representative of that which would be found in any heterogeneous group of students. In general, the range of suggested changes reflected relative strengths and weaknesses of each trainee.

Other general feelings centered around needs for more positive reinforcement from the individual videotape review sessions, and a desire to have more qualified people in charge of these sessions. A further concern was that as trainees, they would leave the program deficient in some subject areas because they received module instruction conducted by graduate students whom they considered less knowledgeable than the Ph.D. faculty that instructed students enrolled in the traditional education programs. As can be seen from the analyses, their fear was unfounded, since they showed an equal proficiency in all measured areas.

One very important conclusion reached by the trainees was that it was extremely beneficial to immediately apply obtained knowledge in a practical setting. They felt the intrinsic feedback from their "hands-on" experience made an invaluable contribution to their overall understanding of the module materials. It is interesting to note that M.Ed. practicums are required in hope of providing this same opportunity for practical application which will enhance understanding of classroom work. It is doubtful, however, that these practicums actually meet criterion necessary to provide similar experience. Perhaps benefit could be derived from observing the trainees' positive experiential gain and adopting those practicum opportunities more suited to meeting the individual future needs of students in the various education areas.

Results and discussion. This section presents the results of the comparisons among the three student groups: special education, early childhood, and module trainees. An attempt was made to equate the groups as closely as possible on both verbal and quantitative G.R.E. scores. Initially, analyses of variance were performed on the G.R.E. verbal and quantitative scores, as well as on the four dependent test measures (videotape, special education, early childhood, general education). The results of these comparisons are presented in tables I to VI. The means for the three groups (special education, early childhood, and module trainees) on G.R.E.-V. scores are respectively: 512.50, 588.75, and 567.50. Since these means were substantially different, and in fact reached significance at the .145 level, the analysis of co-variance technique was employed to compare the groups on the four dependent measures. Following are tables and evaluative discussion related to analyses performed on these dependent measures.

Videotape test. Results of the analysis of covariance for the three groups on the videotaped test are as found in table VII. The rationale for the development of the videotape test was to provide a means for assessing a subject's ability to visually identify teaching processes and behavioral product objectives. Student trainees enrolled in the modules dealt with classical education principles utilized in their practical module classroom application. They were systematically videotaped throughout the program to allow maximum opportunity for feedback on their teaching performance. It was hypothesized that due to direct exposure and experience with the different teaching procedures, as well as introduction to the response media of the videotaping, that these module trainees would be better prepared to identify visual behavioral and theoretical practices utilized in teaching situations.

The adjusted group means for the three groups (special education, early childhood and module trainees) respectively are: 18.942, 19.014 and 18.919. These findings indicate almost identical adjusted means for the three groups. Therefore, while the practical training did not enhance the module trainees visual discrimination abilities for teaching behaviors and processes, neither did their lack of traditional classroom study decrease this ability.

Table VIII presents the results of the analysis of covariance for the three groups on the special education test. The obtained F value of 2.109 ($.1 < p < .2$) was due to the slightly higher mean obtained by the special education group than by the other two groups. The respective adjusted means for the three groups of special education, early childhood and module trainees are: 42.61, 38.14 and 39.37. It would be expected that this special education group which was entirely trained in the specific content area that the test measured, would do better. The relatively small magnitude of the difference between the groups appear to indicate that at the program conclusion module trainees were not deficient in the content area of special education.

Table IX reports the findings of the analysis of covariance for the three groups on the early childhood test. The reported results indicate no significant difference among group performance on the early childhood test. Adjusted group means for the groups, special education, early childhood and module trainees, respectively are: 40.15, 38.33 and 38.27. The conclusion is that specialized traditional instruction for students in the area of early childhood, does not necessarily cause them to perform significantly better than the other groups on a test designed to measure early childhood concepts. The actual results show that a slightly higher proficiency was attained by special education students, but this difference was extremely small and not of statistical significance.

Results of the analysis of covariance for the three groups on the general education test are presented table X. Analysis results show a difference among the groups at the .025 level of significance. From observing the table of adjusted group means for the three groups of special education, early childhood and module trainees, it is obvious

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that the adjusted means of the special education and module trainees do not differ greatly (23.99 and 23.25 respectively), but both are appreciably higher than the adjusted mean for the early childhood group (19.64). Therefore, from this presentation, the special education and module trainee groups performed somewhat better on a test of general education knowledge.

The rationale for inclusion of this test as a dependent measure was to test the hypothesis that if a group of students were taken from the mainstream of traditional classroom study and provided only brief module instruction with extended practical experience, then a possible deficiency in general education conceptual development and ideation would occur. This, in fact, did not occur, and the module trainees did as well as one group (special education) and somewhat better than the early childhood group when compared on this variable. The conclusion may be made that the experimental concept of modular training did not create a deficit in general education knowledge.

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ANALYSES

Table I

Analysis of Variance Summary Table for the Three Groups on G.R.E. Verbal Scores

Source of Variance	df	Sum of Squares	MS	F	P
Between	2	24775.00	12387.50	2.12	.145
Within	21	122787.50	5847.02		
Total	23	147562.50			

Table II

Analysis of Variance Summary Table for the Three Groups on G.R.E. Quantitative Scores

Source of Variance	df	Sum of Squares	MS	F	P
Between	2	2258.33	1129.17	.167	.847
Within	21	142075.00	6765.48		
Total	23	144333.33			

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Table III

Analysis of Variance Summary Table for the Three Groups on Videotape Test Scores

Source of Variance	df	Sum of Squares	MS	F	P
Between	2	1.5833	.7917	.081	.923
Within	21	205.3750	9.7798		
Total	23	206.9583			

Table IV

Analysis of Variance Summary Table for the Three Groups on Special Education Test

Source of Variance	df	Sum of Squares	MS	F	P
Between	2	56.0833	28.0417	1.669	.213
Within	21	352.8750	16.8036		
Total	23	408.9583			

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Table V

Analysis of Variance Summary Table for the Three Groups on Early Childhood Test

Source of Variance	df	Sum of Squares	MS	F	P
Between	2	8.5833	4.2917	.293	.749
Within	21	307.2500	14.6310		
Total	23	315.8333			

Table VI

Analysis of Variance Summary Table for the Three Groups on the General Education Test

Source of Variance	df	Sum of Squares	MS	F	P
Between	2	45.0833	22.5417	2.059	.153
Within	21	229.8750	10.9464		
Total	23	274.9583			

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Table VII

Analysis of Covariance Summary Table for the Three Groups on Video-Tape Test

Source of Variance	df	Residual Sum of Squares	MS
Total	22	198.9621	
Within	20	198.9240	9.9462
Difference	2	.0381	.0191

F(2,20)=.002

Table VIII

Analysis of Covariance Summary Table for the Three Groups on Special Education Test

Source of Variance	df	Residual Sum of Squares	MS
Total	22	408.7039	
Within	20	337.5334	16.8767
Difference	2	71.1705	35.5853

F(2,20)=2.109

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Table IX

Analysis of Covariance Summary Table for the Three Groups on the Early Childhood Test

Source of Variance	df	Residual Sum of Squares	MS
Total	22	312.5835	
Within	20	297.2382	14.8619
Difference	2	15.3453	7.6727

F(2,20)-.516

Table X

Analysis of Covariance Summary Table for the Three Groups on the General Education Test

Source of Variance	df	Residual Sum of Squares	MS
Total	22	244.0320	
Within	20	167.2164	8.3608
Difference	2	76.8156	38.4078

F(2,20)=4.594

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Summary and conclusions. Inferences which may be made regarding module programs of the nature investigated here are limited somewhat by the relatively small sample sizes available for this investigation. However, the analyses do suggest that this particular mode of training does not result in deficiencies in the traditional content areas that students are normally expected to attain proficiency in. It may be concluded that as a result of their module instruction the trainees performed no better or worse that their student counterparts receiving traditional classroom instruction. It is also possible to assume that they benefited more from this method of instruction than did the traditionally educated groups, since in addition to attaining equal area knowledge proficiency, the trainees gained immediate "hands-on" experience and feedback from this opportunity.

PROJECT SUMMARY AND CONCLUSIONS

Summary

The summary discusses the feasibility of the Comfield model in developing and implementing this Performance-Based Special Education Teacher Preparation Program. The Comfield Model includes three phases - development, implementation and operational. This project covered the development and implementation phases therefore comments will be limited to those aspects.

The four Steps of the model were very helpful in defining the information that needed to be collected and then how to organize it. As mentioned previously, much time was spent with the staff in developing an understanding of these four Steps. It was often difficult for some to change their way of viewing children, teaching, and teacher training. From conversations with other professionals who have attempted to use the Comfield Model this is not an uncommon problem but a significant one. Throughout the project much more development would have occured had more staff been either able or willing to grasp the concepts of the Model.

Step I included the identification of developmental learner outcomes, the relevance of these outcomes, and measures to assess the outcomes. In order to identify the outcomes it was necessary to carry out a complete review of the Child development literature. Developmental sequences were constructed initially in the major areas of development and then divided into subareas as evidence of their existence surfaced. These subareas of development became the developmental goals of early childhood while the ontogenies within them provided a guide for where the child is and where does he go next. Often there were gaps in these ontogenies particularly from two to four years of age. From the ontogenies it is quite evident that the major developmental phase of child growth ends at approximately age seven for most children and at this point on skill types of items are found in the literature. These ontogenies clearly support the issue in early childhood that educational environments that support child development rather than skill development should be provided for children through the seventh year. Relevancy of an area of development was usually available except in very fine subareas. Occasionally relevancy of an area was found, but there was a void of identification of that behavior in the young child.

Perhaps one of the weakest elements of the development phase is in the measures to accompany the ontogenies. Many of the ontogeny items were drawn from developmental tests while others from isolated pieces of research, and still others from a more descriptive base. There was not time to develop a measurement system for each ontogeny so the students were exposed to standardized instruments where they were appropriate.

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In Step I, it became evident that there is still a wealth of information that is unknown about the young child. Longitudinal studies are a must to fill the ontogeny gaps and to develop a measurement system. Since the child curriculum and teacher training curriculum rest upon this void it seems imperative that major efforts be placed on gleaning more information about the young child's development. All the ontogenies can be found in Monograph II, while each module provides the ontogenies in that specific area.

Step II, represents the strengths of the development and implementation phases. Step II entailed identifying the conditions in the environment that bring about the developmental learner outcomes. These conditions include instructional strategies or processes, learner characteristics, situational variables, and content. As mentioned previously in this report three processes, developmental, directive and behavior modification, were identified in Phase I.

The research data on a clearer definition of the developmental and directive processes is currently being analyzed and was not ready for this report. The findings are quite significant and will make it feasible to measure teacher style and its effect on child response in early childhood. The work is being done by Professors Marlis Mann and Herb Richards and should be available by January, 1975. A description of the directive and developmental processes can be found in Monographs IV and V.

Learner characteristics were somewhat difficult to describe. The literature posed the greatest problem in that it described categories of children (blind, learning disabled, emotionally disturbed, etc.) rather than how children who have an identified hearing loss of severely deaf level learn syntax. Since very little of the literature related a developmental delay in one area of development to learning in the same or different area it was difficult to develop the learner characteristics sections in modules to a meaningful level. From perusing the literature it would suggest that special educators in particular are not getting at the heart of the developmentally delayed child's learning but rather are studying surface issues such as comparison of a delayed group to a normal group on a standardized measure. Hopefully, the ontogenies and subclassifications of developmental areas will assist educators in selective significant questions for studying delayed children so as to build a body of information regarding learner characteristics and their role in the developmentally delayed child's learning.

Situational variables were not dealt with to a large degree. They were generally described as they pertained to learning situations in the Overview Module and then if relevant situations were identified in specific developmental areas, they were included in those modules.

Content was dealt with mainly in terms of concept development. Discussions on content occur in the Developmental process, Cognitive and Language Development, Semantics Modules.

The curriculum (Step II) was fully implemented with normal and delayed children (2-6) in the Child Development Center. A full description of this implementation is in Monograph II.

The fifth component of Step II is the Parent Education Program. The significance of the parent education program cannot be over emphasized. People who are in early childhood education must also be in parent education if the potential of children is to be realized. The parents are trained to provide conditions in the home setting, thereby providing continuity with the preschool setting. The training of parents is really Step IV but the content of that program is Step II so it is mentioned here. On the most part the parents felt very positive about Parent Education even though in some cases graduate students were teaching Ph.D. parents. With the Parent Education Program it is felt that there is a total child program on Step II.

Step III consisted of identifying the knowledge and skills needed to be able to create the conditions in Step II that would bring about the developmental learner outcomes in Step I. Skill competencies were much easier to define than were the cognitive competencies. The question of how much does one have to "know" to be able to "do" is indeed a difficult one. Refinement of these competencies in this project is the next Step. Those that were identified can be found in Monograph I - the overview of the teacher preparation program.

One of the strengths of the program at Step III was the within evaluation (see item (6) in Table I). Students were videotaped throughout each module using the directive and developmental processes to determine if they could use the processes with different content.

Step IV. The teacher preparation program (conditions in the environment to bring about Step III) was implemented through a series of modules - a program overview module - three process modules - and several product modules built upon the developmental outcomes for young children. The four elements included in the program are performance based, field centered, personalized and systematically designed. Following is a discussion of each of these elements as they related to this project.

The program strength in performance was in the three processes. Most students in the final stages met the over all performance goal of being able to facilitate an environment that would assist the growth of any child normal or delayed in development. The goal of becoming developmental diagnosticians - the ability to assess a child's strengths and weaknesses and current developmental levels was met only when information in the program was available. As discussed earlier in this summary, the voids in the literature prevented this goal from becoming a reality.

Throughout the program the students' styles, personality, temperment were much more evident to the staff than those students in the more traditional programs. The data that is currently being analyzed supports the staff observations.

The program was personalized in that every attempt was made to meet individual needs. Students were allowed to test out of product modules, and vary field center placement. It was learned that the program would deal effectively with a more homogenous group of students - for example all preservice or all graduates of an undergraduate elementary education program. One student had five years of teaching experience on kindergarten and switched programs after one semester as it was not possible to change the program to the degree that was needed. Several students would request types of personalization and not know why. It became evident that within the group of students selected for the implementation phase there existed a lack of goals, commitment to the profession and basic understanding of self. Much staff time was devoted to counseling.

The field-centered aspect of the program was very successful. The seminar for the field center personnel provided continued interaction among UVA staff and field centers, as well as an understanding by the field center as to their role with the student and expectations of the student. The students also felt they benefited from the three very different early childhood experiences.

The last aspect of the Comfield Model is that it is systematically designed to bring about specified outcomes in young children and in the students in teacher preparation. The greatest deviation from the Comfield Model occured here. The reason being the concept of development versus skill and the different ways of measuring each. This concept has been discussed previously in this report and in the Developmental Process Monograph. The child development literature convincingly supports the notion that each child has unique developmental patterns and even though one sets an environment to enhance growth in a particular area such as motor the child may be spurting in language development and concentrating his energies there. It makes sense rather than to continually redesign motor conditions to change the developmental outcome to match present learner characteristics of the child. The measure of effectiveness is a continual assessment in all areas of child growth.

There is some child development literature that suggests aspects such as labeling, attending, a conservation situation can be trained, or shaped. In these cases a behavioral objective could be used and a measure such as the Teacher Effectiveness Formula might be appropriate.

Although the unique difference in the child (0-7 years of age) from older children and adults effects the way objectives are set, another problem is the lack of measures of child development and teacher child interaction. The analyses from the scale presented in the Developmental Process Monograph has shown significant results in getting at this problem.

Conclusions

This project did not go beyond the initial implementation phase so the operational aspects of the Comfield Model have yet to be tested with this program. As mentioned previously the development that has yet to occur to enable an operational phase includes: developmental measures to accompany the ontogenies; in many instances research to fill existing gaps in ontogenies; more refinement in understanding and measuring the developmental process; provision of more individualized tracts in the teacher training program for recycling and better screening methods other than grade point average and graduate record exam scores for entrance into the program.

Above all a program of this nature takes a commited staff as it requires more time, effort, and emotional involvement due to the individualizing and personalizing aspects, than traditional classes. However, this may not be true once the program is operationalized.

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